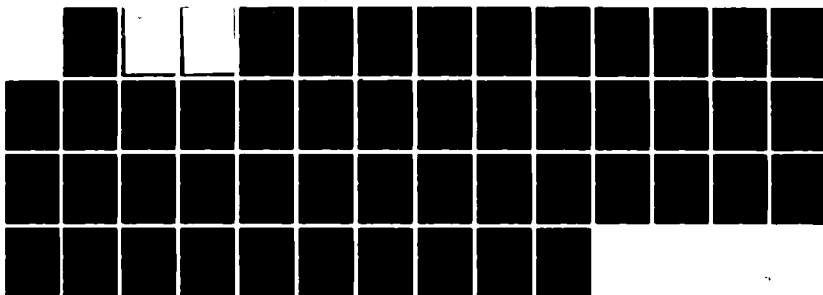


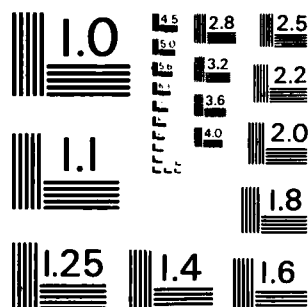
AD-A134.552 12829L LANCE MISSILE NUMBER 4584 ROUND NUMBER 393 MST
30 SEPTEMBER 1983(U) ARMY ELECTRONICS RESEARCH AND
DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER SEP 83
UNCLASSIFIED ERADCOM/ASL-DR-1320

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 12829C Lance, Missile Number 4584, Round Number 393 MST are presented in tabular form.			

CONTENTS	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
TABLES	
1. Surface Observation Taken at LC-33 at 1406 MDT-----	4
2. WSD Pilot-Balloon Measured Low Level Wind Data Taken at 1406 MDT-	5
3. Aiming and T-Time Computer Mer Message Data-----	6
4. Jallen Significant Level Data Taken at 0900 MDT-----	8
5. Jallen Upper Air Data Taken at 0900 MDT-----	10
6. Jallen Mandatory Levels Taken at 0900 MDT-----	14
7. Jallen Significant Level Data Taken at 1100 MDT-----	15
8. Jallen Upper Air Data Taken at 1100 MDT-----	17
9. Jallen Mandatory Levels Taken at 1100 MDT-----	22
10. WSD Significant Level Data Taken at 1406 MDT-----	23
11. WSD Upper Air Data Taken at 1406 MDT-----	25
12. WSD Mandatory Levels Taken at 1406 MDT-----	30
13. Holloman Significant Level Data Taken at 1320 MDT-----	31
14. Holloman Upper Air Data Taken at 1320 MDT-----	32
15. Holloman Mandatory Levels Taken at 1320 MDT-----	37
16. Jallen Significant Level Data Taken at 1400 MDT-----	38
17. Jallen Upper Air Data Taken at 1400 MDT-----	40
18. Jallen Mandatory Levels Taken at 1400 MDT-----	44

INTRODUCTION

12829C Lance, Missile Number 4584, Round Number 393-MST, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1406:04 MDT, 30 Sep 1983. The scheduled launch time was 1400 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE

WSD 2760 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to high as possible feet in 500-foot increment.

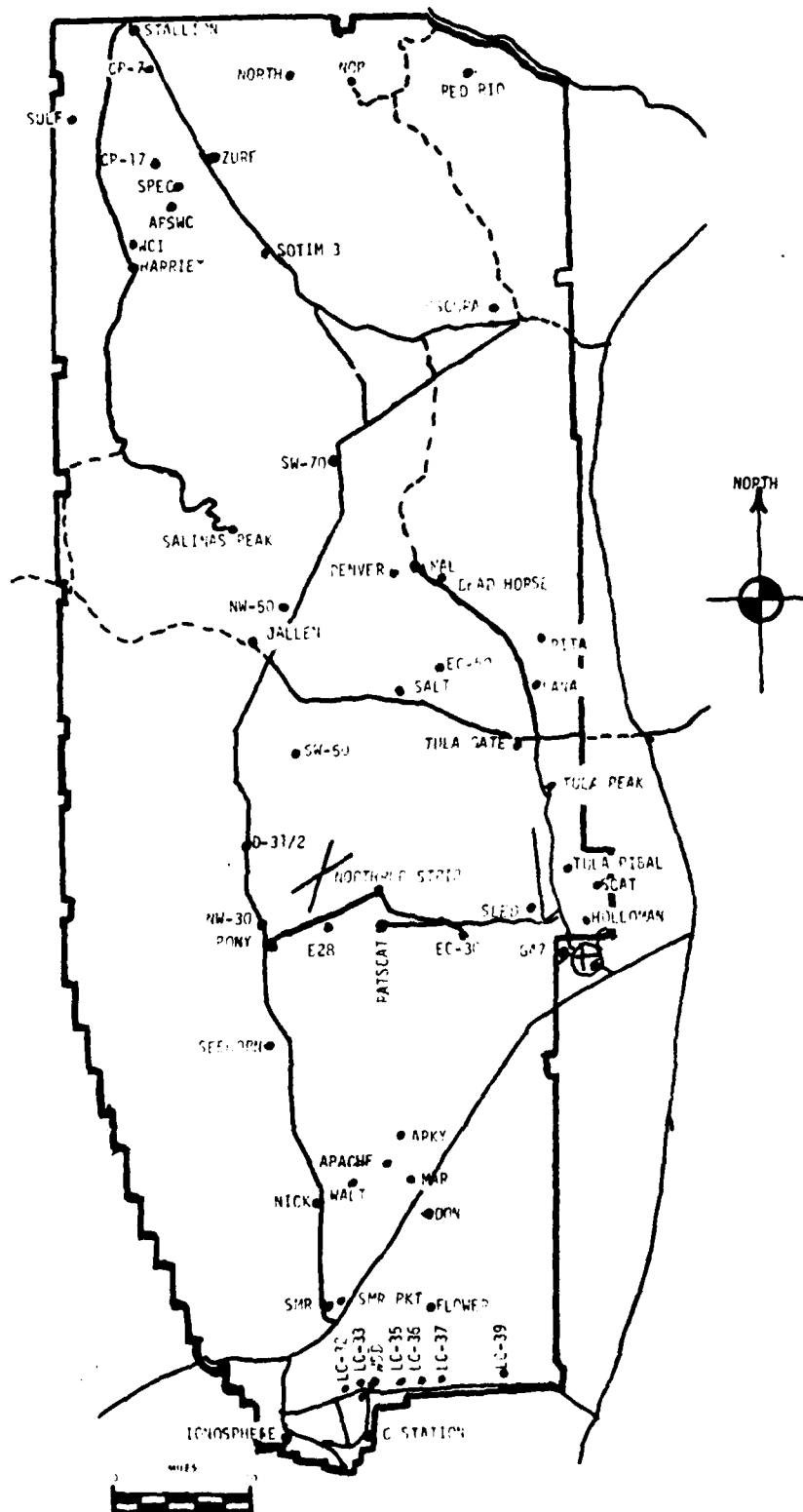
SITE AND TIME

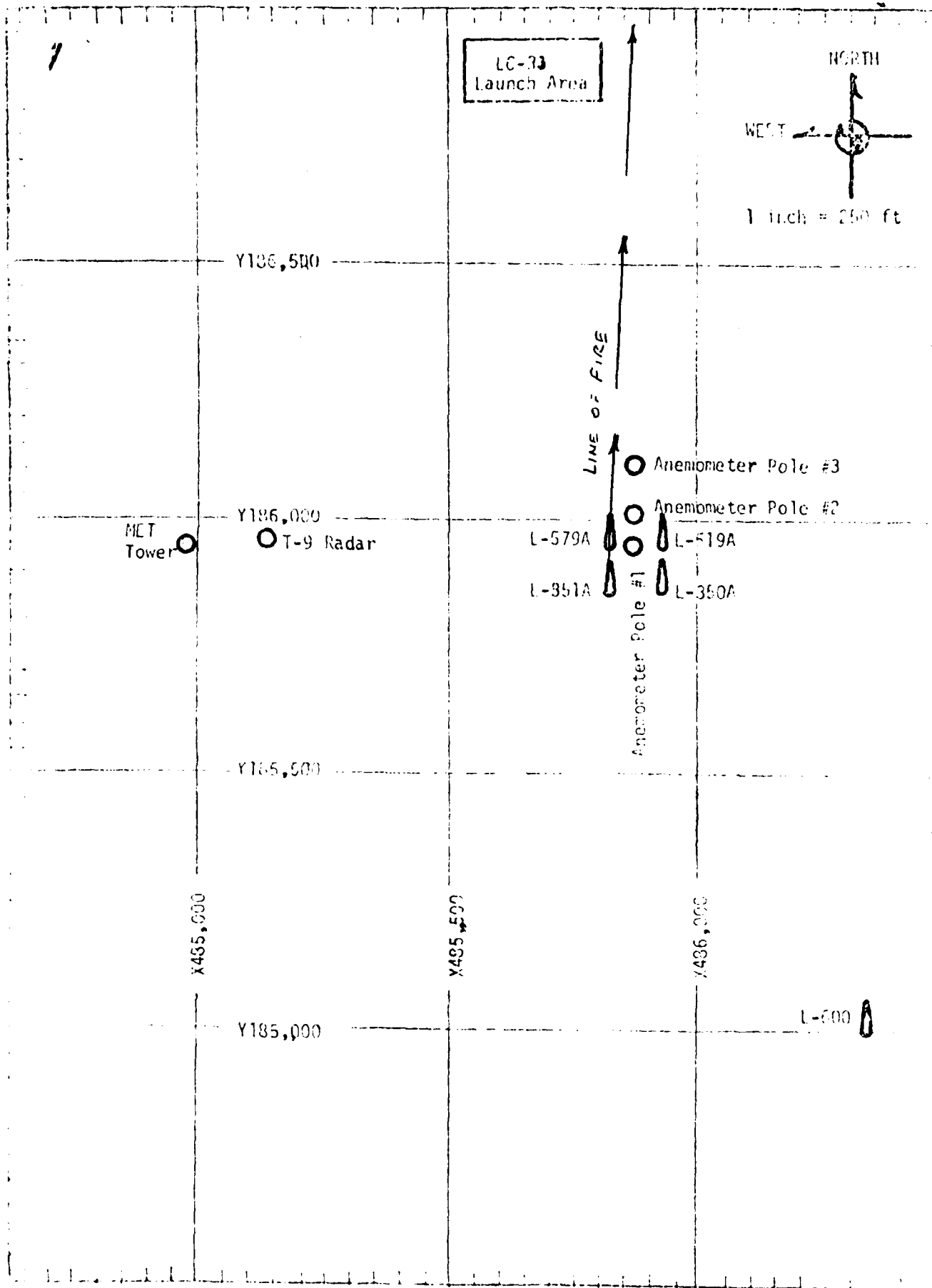
Jallen 0900 MDT
Jallen 1100 MDT
WSD 1406 MDT (Launch Area Data)
Holloman 1320 MDT (Mid-Course Data)
Jallen 1400 MDT (Impact Area Data)



Al

WSMR METEOROLOGICAL SITES





PILOT BALLOON OBSERVATION

TABLE 1		STATION 10-33						
DATE 30 Sep 83		Y= 484.185.64 X= 185.957.73 H= 3995.00						
TIME U D T	PRESSURE HRS	TEMP C	DEW POINT C	RELATIVE HUMIDITY %	WIND SPEED kts	WIND DIRECTION degs In	WIND CHARACTER kts	VISIBIL- ITY
1406	880.5	26.0	15.8	53	04	250		10

OBSERVATIONS TO VISIBILITY	CLOUDS						REMARKS			
	1st LAYER			2nd LAYER						
	AMT	TYPE	HGT	AMT	TYPE	HGT				
	1	SC	3500	5	CU	5000	3	AC	10,000	CB N+E TCU N-NE+W, RWU W

PSYCHROMETRIC COMPUTATION

TIME:	MDT	1406
DRY BULB TEMP.	26.0	
WET BULB TEMP.	19.0	
WET BULB DEPR.	7.0	
DEW POINT	15.8	
RELATIVE HUMID.	53	

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM WSD DATE 30 Sept 83 TIME 1406

COORDINATES (WSTM) X= 488,852.29 Y= 184,982.45 E= 3993.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO

HEIGHTS ARE METERS AGL OR FEET AGL.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
SFC	210	16
60	218	13
120	223	11
180	232	10
240	221	08
300	223	09
360	240	06
420	220	09
480	234	10
540	236	07
600	221	12
660	240	11
720	224	09
780	229	10
840	256	08
900	226	10
960	211	12
1020	197	08
1080	192	10
1140	184	10
1200	205	17
1260	212	12
1320	210	11
1380	203	11
1440	216	10
1500	204	12
1560	223	18
1620	221	18

[illegible][illegible]

AIMING AND T-TIME COMPUTER MET MESSAGE DATA

30 September 1983

JALLEN 0900 MDT

METCM1332065

301500124879

00178002 29260879
01206002 29170868
02308009 28980843
03321016 28740804
04342020 28500758
05378023 28190714
06383039 27790671
07364041 27500631
08359039 27190593
09357038 26920557
10390034 26690523
11400033 26350490
12403043 25940444
13384046 25230389
14378045 24400339
15388051 23580294
16401062 22820254
17405081 22170219
18429083 21450181
19425088 20860159
20414054 20580135
21381038 20400115
22312016 20790097
23387026 20990083
24017001 21310070
25352017 21510060
26100011 21750051

JALLEN 1100 MDT

METCM1332065

301700124879

00382002 29530879
01249004 29310869
02304005 29080844
03305013 28750805
04345021 28460759
05385028 28120714
06388033 27820672
07378035 27560632
08383031 27260594
09382034 26960558
10389036 26600523
11386041 26320491
12398039 25820445
13401041 25130389
14403039 24380339
15403054 23680294
16390066 22910254
17400073 22120219
18424085 21400187
19426089 20950159
20415054 20760135
21372041 20500115
22340026 20640097
23370022 21120083
24064005 21390071
25371015 21600060
26314006 21660052

WSD 1406 MDT

METCM1324064

302010122880

00373016 30110880
01408012 29860870
02385007 29690846
03389011 29310808
04367013 28830762
05377018 28430718
06375025 28090676
07373025 27760636
08366027 27390597
09371029 27030561
10400025 26740527
11400034 26550494
12390044 26010448
13384028 25310393
14398026 24670343
15405043 23930298
16403051 23070258
17402066 22230222
18422088 21550190
19428086 20810162
20434066 20570137
21393044 20440116
22378038 20480098
23395017 21090084
24052012 21310071
25359016 21490061
26185004 21670052

AIMING AND T-TIME COMPUTER MET MESSAGE DATA

30 September 1983

HOLLOMAN 1320 MDT
 METCM1329061
 301930125877
 00338008 30120877
 01352005 29860867
 02360008 29430842
 03311012 29060804
 04344012 28650758
 05330017 28280713
 06339022 27930671
 07348028 27580632
 08367034 27240593
 09368033 27080557
 10373033 26830523
 11385032 26520491
 12416043 26020445
 13419044 25370390
 14405040 24550340
 15400039 23830296
 16397054 23050256
 17409066 22180220
 18420086 21530188
 19426095 20930100
 20431056 20630136
 21396042 20380115
 22371027 20490098
 23395030 21080083
 24479003 21290071
 25367011 21560060
 26106008 21690052

JALLEN 1400 MDT
 METCM1332065
 302000124879
 00000000 29720879
 01374002 29550869
 02467006 29270844
 03439013 29020805
 04394014 28600759
 05350021 28180715
 06341029 27900672
 07354035 27560632
 08358041 27260594
 09373042 27010558
 10383043 26760524
 11388045 26480491
 12401047 25900446
 13405053 25250390
 14405054 24490340
 15385042 23780295
 16390057 22970255
 17401074 22140220
 18411092 21490188
 19418092 20890160
 20423069 20730136
 21383049 20580115
 22388037 20530098
 23365026 21080083
 24586014 21250071
 25400008 21510060
 26183005 21670052

GEOMETRIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

SIGNIFICANT LEVEL DATA
 2730030145
 JALLEN

TABLE 4 Con't

STATION ALTITUDE 4051.00 FEET MSL
 0900 MDT
 100

WINDSPEED MILES PER HOUR	GEOMETRIC ALTITUDE MILES	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT
105.0	51521.7	-71.1	
100.6	52063.0	-67.1	
100.6	52177.7	-66.7	
100.6	52297.5	-65.0	
100.6	52501.4	-63.6	
100.6	52700.5	-60.8	
100.6	52844.8	-60.5	
100.6	53053.1	-55.2	
100.6	53253.8	-53.2	
100.6	53453.0	-54.4	

STATION ALTITUDE 4901.00 FEET MSL
50 SUR. PS
ASCENDING TO, 195 0900 MDT

UPPER AIR DATA
2750050195
JUL 67

GEODETIC COORDINATES
13-16712 LAT. N
106-49511 LONG. W

TABLE 5

GEODETIC ALTITUDE MSL FEET	PRESSURE	ALTITUDE DEGREES CORRECTION	REL. HUMID. PERCENT	DENSITY G/CM ³	SPEED OF SOUND KNOTS	WIND DATA CORRECTION DEGREES (TD)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	975.7	17.5	14.5	1006.0	600.5	100.0	3.9	1.000300
3500.0	969.7	16.7	13.5	1005.9	605.0	140.2	4.8	1.000301
3000.0	964.9	16.0	13.4	1006.4	603.4	162.5	7.5	1.000300
2500.0	959.5	15.2	13.4	1004.1	605.8	172.1	10.6	1.000297
2000.0	954.0	14.5	13.0	989.6	601.6	177.5	13.8	1.000290
1500.0	948.5	13.8	12.1	975.4	600.5	180.5	15.7	1.000283
1000.0	940.5	11.5	10.2	962.1	600.0	182.6	17.6	1.000275
750.0	930.1	11.5	9.4	945.6	600.0	187.4	18.2	1.000262
500.0	922.1	10.8	7.8	930.4	600.1	192.2	18.7	1.000254
250.0	915.1	9.4	6.4	916.0	607.0	197.5	20.3	1.000248
50.0	908.6	8.0	4.7	905.0	605.9	202.2	22.2	1.000242
1000.0	921.5	8.1	3.6	899.0	604.6	206.6	25.1	1.000236
1000.0	903.2	7.5	2.5	876.4	603.6	210.5	28.4	1.000231
1050.0	895.2	6.2	1.8	865.7	602.4	213.9	30.8	1.000226
1100.0	882.4	4.8	1.3	851.9	600.8	217.0	33.0	1.000224
1150.0	869.8	5.5	1.0	840.2	600.2	216.1	36.5	1.000221
1200.0	857.4	2.1	1.5	828.6	607.6	215.0	35.9	1.000218
1250.0	845.1	1.5	1.3	815.1	606.9	209.5	37.9	1.000214
1300.0	832.1	1.0	1.5	801.5	606.2	204.7	40.4	1.000211
1350.0	821.2	2.2	1.2	788.7	605.5	202.7	41.1	1.000206
1400.0	809.5	2.5	1.2	776.8	600.1	201.5	41.2	1.000202
1450.0	795.6	1.7	1.2	765.0	602.9	201.7	40.5	1.000197
1500.0	780.7	2.7	1.1	753.5	601.6	202.4	39.1	1.000193
1550.0	775.0	3.7	1.1	741.9	600.5	202.2	38.4	1.000189
1600.0	764.0	4.5	1.0	729.5	600.7	201.4	37.6	1.000185
1650.0	753.4	4.9	1.0	717.5	600.9	204.0	35.9	1.000181
1700.0	743.2	5.4	1.0	705.2	600.2	203.7	34.1	1.000175
1750.0	732.5	5.9	1.0	693.5	607.4	214.5	33.9	1.000170
1800.0	722.6	6.5	1.0	681.6	606.7	219.9	34.8	1.000164
1850.0	712.5	7.7	1.0	671.7	605.1	221.8	34.8	1.000160
1900.0	702.6	7.0	1.0	661.9	603.6	222.5	34.6	1.000157
1950.0	692.0	6.3	1.0	651.5	602.5	224.4	34.3	1.000152
2000.0	683.2	10.5	1.0	640.5	601.6	220.7	34.2	1.000147
2050.0	675.7	10.8	1.0	628.9	601.0	223.6	35.6	1.000142
2100.0	669.0	11.5	1.0	618.9	600.9	230.7	38.0	1.000140
2150.0	655.2	12.8	1.0	606.9	600.7	230.6	38.8	1.000137
2200.0	640.0	13.8	1.0	599.2	602.5	220.1	37.7	1.000135
2250.0	627.0	14.9	1.0	590.9	600.2	222.4	37.7	1.000130
2300.0	620.7	15.2	1.0	578.9	600.7	221.6	42.8	1.000130
2350.0	620.1	16.2	1.0	569.4	600.6	221.0	48.0	1.000128

STATION ALTITUDE 9251.00 FEET MSL
 TO DEP. 63
 ASCENSION NO. 105 0900 MDT
 UPPER AIR DATA
 2730030145
 JALLEN
 METEOROLOGICAL COORDINATES
 33-16.712 LAT DEG
 106-49.511 LONG DEG

TABLE 5 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE C	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KIOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KIOTS	INDEX OF REFRACTION
24000.0	911.7	-17.1	-30.2	10.0	560.1	623.4	221.0	51.8	1.000126
24500.0	903.5	-18.0	-35.9	10.9	551.9	621.7	221.1	55.5	1.000125
25000.0	895.3	-20.1	-32.2	32.0	544.0	619.8			1.000124
25500.0	887.3	-21.5	-20.5	48.3	535.9	618.1			1.000123
26000.0	879.2	-22.7	-27.8	63.0	527.4	616.7			1.000121
26500.0	871.6	-24.0	-26.9	76.5	519.1	615.2			1.000120
27000.0	863.8	-25.1	-20.6	66.1	510.8	613.7			1.000117
27500.0	856.2	-26.3	-32.5	55.7	502.6	612.2			1.000114
28000.0	848.6	-27.5	-35.7	45.3	494.0	610.6			1.000112
28500.0	841.0	-28.7	-30.3	30.9	486.7	609.1			1.000110
29000.0	834.4	-30.1	-42.8	27.7	479.3	607.3			1.000108
29500.0	827.3	-31.4	-50.0	13.8	471.6	605.8			1.000105
30000.0	820.5	-32.7	-52.1	12.2	464.0	604.1			1.000104
30500.0	813.5	-33.8	-52.9	12.5	456.3	602.7			1.000102
31000.0	806.7	-35.0	-53.7	12.7	448.7	601.2			1.000100
31500.0	800.2	-36.2	-54.5	13.0	441.2	599.7			1.000099
32000.0	793.6	-37.5	-55.6	13.0	434.1	598.1			1.000097
32500.0	787.2	-38.8	-56.7	13.0	427.0	596.4			1.000095
33000.0	780.3	-40.0	-50.9	11.0**	419.6	594.9			1.000094
33500.0	774.6	-41.1	-61.5	9.0**	412.3	593.4			1.000092
34000.0	768.3	-42.3	-60.4	6.0**	405.2	592.0			1.000090
34500.0	762.6	-43.4	-60.6	4.6**	398.1	590.5			1.000089
35000.0	756.7	-44.5	-73.0	2.5**	391.2	589.0			1.000087
35500.0	751.0	-45.7	-85.2	.4**	384.5	587.6	224.7	61.9	1.000086
36000.0	745.3	-46.7			377.3	586.3	225.6	62.0	1.000084
36500.0	739.7	-47.6			370.2	585.1	226.3	62.9	1.000082
37000.0	734.2	-48.6			363.3	583.8	226.4	66.1	1.000081
37500.0	728.6	-49.5			356.4	582.6	226.6	69.4	1.000079
38000.0	723.0	-50.5			349.7	581.4	226.2	74.1	1.000078
38500.0	716.4	-51.4			343.2	580.1	229.6	78.7	1.000076
39000.0	713.4	-52.3			336.6	578.9	231.2	82.4	1.000075
39500.0	706.5	-53.3			330.4	577.8	232.9	84.7	1.000074
40000.0	703.7	-54.7			324.8	575.9	234.6	87.1	1.000072
40500.0	700.9	-56.0			319.1	574.0	235.8	88.8	1.000071
41000.0	704.1	-57.1			313.0	572.6	237.6	89.8	1.000070
41500.0	709.3	-58.1			307.0	571.2	238.2	90.9	1.000068
42000.0	703.0	-59.2			301.2	569.8	238.2	91.6	1.000067
42500.0	700.0	-60.2			295.4	568.4	239.3	92.1	1.000066
43000.0	700.0	-61.3			289.6	567.0	239.3	92.6	1.000065
43500.0	702.0	-62.2			284.1	565.8	239.4	92.5	1.000063

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA TRAILED DUE TO MISSING PAV. AZIMUTH AND ELEVATION ANGLES.

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

UNIFORM AIR DATA
2730030145
JULIEN

TABLE 5 Con't

DATE: ALTITUDE: 0900 MDT
20 SEP 63
ASSEMBLY NO. 105

GEODETIC ALTITUDE	PRESSURE	TEMPERATURE	REF. HUM.	DENSITY	SPEED OF	*IND DATA	INDEX
FEET	MILLIBARS	DEGREES F	PERCENT	GM/CM ³	SOUND	DIRECTION	OF
				METER	KNOTS	DEGREES (IND)	REFRACTION
45000.0	167.0	-65.1		278.3	564.7	259.5	1.000002
45500.0	165.7	-65.4		272.5	563.5	259.5	1.000001
46000.0	164.4	-65.7		266.9	562.4	259.9	1.000005
46500.0	163.1	-66.0		261.4	561.3	258.6	1.000008
47000.0	161.8	-66.3		255.8	561.1	258.6	1.000007
47500.0	160.5	-66.6		249.3	560.7	258.1	1.000006
48000.0	159.2	-66.9		243.9	559.7	257.2	1.000005
48500.0	157.9	-67.2		238.7	558.8	256.2	1.000005
49000.0	156.6	-67.5		232.8	558.7	255.9	1.000005
49500.0	155.3	-67.8		226.8	559.2	255.7	1.000005
50000.0	154.0	-68.1		221.0	559.2	252.2	1.000049
50500.0	152.7	-68.4		216.4	558.1	250.7	1.000048
51000.0	151.4	-68.7		212.0	556.6	248.4	1.000047
51500.0	150.1	-69.0		207.7	555.5	244.9	1.000046
52000.0	148.8	-69.3		203.5	553.9	240.4	1.000045
52500.0	147.5	-69.6		198.5	553.7	236.1	1.000044
53000.0	146.2	-69.9		191.6	556.5	231.2	1.000043
53500.0	144.9	-70.2		185.0	559.2	227.6	1.000041
54000.0	143.6	-70.5		180.3	559.4	204.1	1.000040
54500.0	142.3	-70.8		175.8	559.5	200.8	1.000039
55000.0	141.0	-71.1		171.3	559.7	197.6	1.000038
55500.0	139.7	-71.4		165.0	562.2	193.8	1.000037
56000.0	138.4	-71.7		161.5	562.4	183.4	1.000036
56500.0	137.1	-72.0		157.4	562.6	180.0	1.000035
57000.0	135.8	-72.3		153.4	562.8	185.4	1.000034
57500.0	134.5	-72.6		149.5	563.0	184.9	1.000033
58000.0	133.2	-72.9		145.8	563.2	191.5	1.000032
58500.0	131.9	-73.2		142.1	563.5	201.9	1.000032
59000.0	130.6	-73.5		138.5	563.7	212.6	1.000031
59500.0	129.3	-73.8		135.0	563.9	222.7	1.000030
60000.0	128.0	-74.1		131.1	565.2	229.6	1.000029
60500.0	126.7	-74.4		127.3	566.8	232.2	1.000028
61000.0	125.4	-74.7		123.5	568.4	234.0	1.000027
61500.0	124.1	-75.0		120.3	568.8	230.4	1.000027
62000.0	122.8	-75.3		117.6	568.5	227.0	1.000026
62500.0	121.5	-75.6		114.9	568.1	217.6	1.000026
63000.0	120.2	-75.9		112.0	568.6	203.9	1.000025
63500.0	118.9	-76.2		109.2	569.1	195.5	1.000024
64000.0	117.6	-76.5		106.4	569.6	190.0	1.000024
64500.0	116.3	-76.8		103.7	570.1	184.8	1.000023

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

OTHER AIR DATA
2750030145
JALLER
TABLE 5 Cont

STATION ALTITUDE 601.00 FEET AGL
30 SEP. 73 0900 MDT
ASCENDING 10. 100

GEOMETRIC ALTITUDE MSL FEET	PRESSURE	TEMPERATURE AIR DEWPOINT DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM ³ METERS	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TD)	SPEED KNOTS	INDEX OF REFRACTION
69000.0	62.2	-50.6		101.0	570.0	109.1	17.2	1.000023
69500.0	60.7	-50.3		98.5	571.1	196.1	17.0	1.000022
70000.0	59.3	-50.0		96.0	571.6	203.3	16.7	1.000021
70500.0	57.9	-50.5		93.5	572.1	211.3	16.1	1.000021
71000.0	56.5	-50.1		91.1	572.6	219.9	15.8	1.000020
71500.0	55.2	-50.4		88.6	573.1	214.2	9.3	1.000020
72000.0	53.9	-50.9		86.6	573.6	179.5	3.1	1.000019
72500.0	52.6	-50.0		84.4	574.1	68.2	6.0	1.000019
73000.0	51.3	-50.6		82.2	574.6	54.2	14.0	1.000018
73500.0	50.1	-50.2		80.1	575.1	51.2	20.3	1.000018
74000.0	49.0	-50.0		78.2	575.4	50.8	12.7	1.000017
74500.0	47.8	-50.7		76.3	575.7	78.0	5.5	1.000017
75000.0	46.7	-50.5		74.4	576.0	148.0	3.1	1.000017
75500.0	45.5	-50.3		72.6	576.4	192.8	5.0	1.000016
76000.0	44.3	-50.0		70.8	576.7	206.9	8.0	1.000016
76500.0	43.2	-50.3		69.1	577.0	190.0	6.7	1.000015
77000.0	42.0	-50.6		67.4	577.3	168.2	6.2	1.000015
77500.0	41.5	-50.3		65.8	577.6			1.000015
78000.0	40.5	-50.4		64.3	577.5			1.000014
78500.0	39.6	-50.9		62.9	576.9			1.000014
79000.0	38.7	-50.4		61.6	576.2			1.000014

GEODETIC COORDINATES
33.10712 LAT DEG
106.49511 LONG DEG

TEMPERATURE LEVELS
2730030143
JALLEN

TABLE 6

STATION ALTITUDE 4301.00 FEET MSL
30 SEP. 85 0900 NDT
ASCENDING 140. 145

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
ALLIBRES	FEET	DEGREES	DEGREES	PERCENT	PERCENT	DIRECTION	SPEED
						DEGREES(TN)	KNOTS
855.5	4978.	14.0	13.0	94.		161.7	7.3
809.0	6660.	12.1	11.7	98.		181.1	10.3
755.0	8423.	10.0	9.0	70.		190.9	20.0
700.0	10307.	6.7	1.0	71.		210.0	30.0
650.0	12209.	1.7	1.1	95.		211.0	30.9
600.0	14400.	-1.6	-2.0	97.		201.0	40.7
550.0	16661.	-5.1	-6.3	91.		202.0	55.2
500.0	19105.	-9.3	-16.9	94.		222.7	34.5
450.0	21760.	-13.0	-30.7	15.		227.0	30.2
400.0	24672.	-19.3	-34.7	24.		221.1	57.0
350.0	27877.	-27.4	-35.2	47.		999.0XX	
300.0	31451.	-36.2	-54.5	15.		999.0XX	
250.0	35515.	-45.0				220.8	61.0
200.0	40203.	-55.8				235.0	88.5
175.0	43041.	-61.6				239.3	92.5
150.0	46178.	-65.7				236.5	69.1
125.0	49747.	-68.7				229.4	47.2
100.0	54173.	-65.0				195.0	26.3
80.0	58612.	-63.1				228.3	6.5
70.0	61337.	-60.5				217.1	11.3
60.0	64565.	-58.1				199.0	17.0
50.0	68200.	-55.2				51.3	20.0
40.0	72066.	-53.7					

** AT LEAST ONE SECURED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

XX WIND DATA DISPLAYED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

GEOLITIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

SIGNIFICANT LEVEL DATA

2730030144

JALLEN

TABLE 7

STATION ALTITUDE 4001.00 FEET MSL
30 SEP. 63
ABSCISSA 10. 100 1100 MDT

PRECIPITATION MILLIMETERS	GEOTHERMIC ALTITUDE FEET	AIR TEMPERATURE DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT
47.4	4051.0	19.9	75.0
57.6	4755.4	17.6	79.0
85.0	5000.1	16.0	92.0
86.0	6757.5	12.7	98.0
70.2	7389.6	11.0	81.0
791.2	8023.3	9.7	90.0
22.2	8000.0	7.7	71.0
70.0	10740.0	5.6	78.0
57.8	10799.2	1.0	95.0
550.0	16715.1	-4.0	84.0
522.2	18050.2	-8.2	97.0
500.0	19154.2	-9.2	98.0
489.4	19655.8	-11.0	69.0
476.4	20383.9	-12.1	38.0
469.6	20737.6	-14.1	14.0
463.1	21091.8	-15.0	13.0
447.0	21022.1	-14.9	13.0
443.2	22185.3	-13.6	12.0
409.0	24710.1	-20.6	19.0
386.6	25593.1	-22.1	21.0
365.2	25912.2	-25.5	78.0
343.6	27049.9	-27.9	79.0
325.2	29047.0	-31.8	63.0
319.8	30109.6	-32.5	43.0
309.0	31057.5	-34.1	27.0
281.6	31512.9	-35.2	29.0
276.0	32053.6	-39.1	25.0
276.0	35609.1	-44.8	
219.2	38053.7	-51.9	
200.0	40390.0	-56.5	
189.4	42080.3	-60.2	
175.7	43024.9	-61.3	
157.8	45250.7	-64.8	
150.0	46276.1	-69.2	
136.8	48122.0	-66.9	
131.6	48900.0	-64.2	
113.6	51792.0	-70.1	
111.0	52513.1	-67.3	
100.0	54752.1	-68.0	
46.0	55000.7	-65.2	

OF OUR IIC COORDINATES
 33.16712 LAT IIC
 106.49511 LONG IIC

ATMOSPHERIC LEVEL DATA
 2750030149
 CALLED

TABLE 7 Con't

STATION ALTITUDE 9,311.00 FEET MSL
 30 SEP. 83 1100 MDT
 100

PRESSURE GROUP ALTITUDE FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR	DEWPOINT	
	DEGREES CENTIGRADE		
91.0 5004.3.5	-65.8		
92.0 5059.7	-61.2		
70.0 6150.0.0	-59.7		
67.4 6239.5.8	-57.8		
50.0 68640.0	-56.1		
48.4 69320.0	-57.6		
43.4 71606.7	-55.1		
36.0 75559.2	-54.7		
30.0 79933.0	-52.5		
20.0 89503.0	-47.6		
13.4 93673.0	-47.2		

STATION ALTITUDE 4000.00 FEET MSL
30 SEP. 63 1100 MDT
ACQUISITION NO. 149

UPPER AIR DATA
2730030144
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 8

GEODETIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TH)	SPEED KNOTS	INDEX OF REFRACTION
4051.0	879.4	14.4	75.0	1037.5	669.4	215.0	3.9	1.000308
4500.0	863.5	17.2	82.2	1031.1	666.2	194.6	4.9	1.000302
5000.0	850.2	18.0	91.8	1016.7	665.0	181.2	6.5	1.000302
5500.0	835.1	14.8	96.2	1003.1	663.5	173.3	8.3	1.000296
6000.0	820.3	13.6	96.4	989.7	662.0	168.2	10.2	1.000290
6500.0	805.6	12.5	95.6	976.2	660.5	174.2	12.6	1.000282
7000.0	791.2	11.6	87.4	962.2	659.3	181.2	15.5	1.000270
7500.0	776.9	10.0	82.0	948.0	658.2	187.9	18.1	1.000261
8000.0	762.4	10.2	86.3	932.8	657.6	194.3	20.6	1.000259
8500.0	749.1	9.6	88.6	918.1	656.8	200.5	22.8	1.000255
9000.0	735.5	8.6	79.8	905.1	655.5	207.2	24.8	1.000244
9500.0	722.1	7.7	71.0	892.2	654.1	212.5	26.8	1.000235
10000.0	708.9	6.4	75.2	879.8	652.7	216.6	28.3	1.000231
10500.0	695.8	5.4	79.1	867.0	651.4	219.1	29.9	1.000228
11000.0	682.9	4.6	82.5	853.3	650.5	219.0	31.4	1.000225
11500.0	670.3	3.8	85.9	839.8	649.6	219.1	32.8	1.000221
12000.0	657.9	3.1	89.3	826.5	648.7	218.0	33.7	1.000218
12500.0	645.7	2.5	92.8	813.4	647.8	214.5	34.0	1.000215
13000.0	633.7	1.7	94.5	800.6	646.9	213.9	33.4	1.000211
13500.0	621.7	.7	93.1	788.1	645.8	213.6	32.8	1.000206
14000.0	610.0	-.2	91.7	775.6	644.7	214.1	32.1	1.000201
14500.0	598.5	-1.0	90.3	763.7	643.7	214.4	31.8	1.000196
15000.0	587.2	-1.7	88.0	751.7	642.6	214.6	32.2	1.000192
15500.0	576.1	-2.7	87.4	740.0	641.6	214.9	32.6	1.000188
16000.0	565.2	-3.6	86.0	728.4	640.5	215.1	33.5	1.000183
16500.0	554.5	-4.4	84.6	717.1	639.4	215.3	34.3	1.000179
17000.0	543.9	-5.5	86.8	706.3	638.1	216.1	35.1	1.000176
17500.0	533.5	-6.8	91.6	696.1	636.6	216.8	35.4	1.000173
18000.0	523.2	-8.1	96.5	686.0	635.0	217.3	37.1	1.000170
18500.0	513.1	-8.6	97.6	674.1	634.4	217.8	38.5	1.000167
19000.0	503.1	-9.1	97.9	662.2	633.8	218.1	39.5	1.000164
19500.0	493.3	-11.0	85.7	651.6	632.6	218.5	40.1	1.000159
20000.0	483.7	-11.1	66.3	642.1	631.1	218.9	40.5	1.000153
20500.0	474.2	-12.7	31.3	633.6	629.9	219.9	40.6	1.000145
21000.0	464.8	-14.7	13.5	626.4	628.5	220.9	40.6	1.000141
21500.0	455.6	-15.9	13.0	614.5	626.1	222.3	40.5	1.000138
22000.0	446.5	-14.5	12.7	601.3	625.6	223.6	40.4	1.000135
22500.0	437.6	-14.5	12.5	589.2	625.6	225.0	38.9	1.000133
23000.0	428.8	-15.9	13.3	580.5	625.0	226.4	37.4	1.000131
23500.0	420.2	-17.2	14.1	571.9	623.3	228.2	37.2	1.000129

GEOPHYSICAL COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

OFFICE AIR DATA
 2730030146
 JALLEN

TABLE 8 Con't

TABLE 8 CONTINUED
 30 SEP 63
 1100 MDT

GEOPHYSICAL ALTITUDE IN FEET	PRESSURE MILLIBAR	TEMPERATURE AIR OR SURFACE DEGREES CELSIUS	REL. HUMIDITY PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) SPEED (KNOTS)	INDEX OF REFRACTION
24000.0	911.8	-14.6	14.9	563.5	621.0	220.7	1.000127
24500.0	905.5	-20.0	15.7	555.2	619.9	225.7	1.000125
25000.0	899.5	-21.1	17.7	546.4	618.5	225.5	1.000123
25500.0	893.5	-22.0	20.7	537.1	617.4	225.6	1.000121
26000.0	887.5	-23.2	40.0	528.6	616.0	220.1	1.000120
26500.0	881.5	-24.5	60.8	520.2	614.5	220.5	1.000119
27000.0	875.5	-25.7	78.1	511.9	613.0	220.7	1.000118
27500.0	869.5	-26.9	78.6	503.7	611.0	227.0	1.000115
28000.0	863.5	-28.0	78.5	495.5	610.1	220.9	1.000113
28500.0	857.5	-29.2	73.8	487.4	608.7	220.7	1.000111
29000.0	851.5	-30.5	67.1	479.4	607.2	225.8	1.000109
29500.0	845.5	-31.5	64.4	471.5	605.8	224.0	1.000107
30000.0	839.5	-32.5	47.7	463.5	604.0	225.1	1.000104
30500.0	833.5	-33.2	36.4	454.9	603.0	225.5	1.000102
31000.0	827.5	-34.0	28.0	446.0	602.5	225.7	1.000100
31500.0	821.5	-35.2	26.0	437.4	601.0	225.9	1.000098
32000.0	815.5	-36.5	25.7	432.5	599.5	226.6	1.000097
32500.0	809.5	-37.0	25.3	425.5	597.0	227.5	1.000095
33000.0	803.5	-38.2	24.6**	418.4	595.9	228.0	1.000094
33500.0	797.5	-40.5	17.0**	411.0	594.5	227.4	1.000092
34000.0	791.5	-41.5	15.1**	403.8	593.1	223.7	1.000090
34500.0	785.5	-42.4	10.4**	396.7	591.0	220.6	1.000088
35000.0	779.5	-43.5	5.7**	389.7	590.4	218.1	1.000087
35500.0	773.5	-44.6	1.0**	382.9	589.0	217.0	1.000085
36000.0	767.5	-45.8		376.2	587.4	218.0	1.000084
36500.0	761.5	-47.0		369.6	585.8	219.2	1.000082
37000.0	755.5	-48.5		363.2	584.2	220.4	1.000081
37500.0	749.5	-49.5		356.9	582.6	221.9	1.000079
38000.0	743.5	-50.8		350.7	581.0	223.7	1.000078
38500.0	737.5	-52.0		344.6	579.4	225.5	1.000075
39000.0	731.5	-53.2		338.4	577.0	227.4	1.000074
39500.0	725.5	-54.4		332.3	576.2	229.4	1.000073
40000.0	719.5	-55.6		326.5	574.7	231.6	1.000071
40500.0	713.5	-56.7		320.5	573.1	233.6	1.000071
41000.0	707.5	-57.8		314.5	571.7	235.5	1.000070
41500.0	701.5	-58.9		308.4	570.2	236.9	1.000069
42000.0	695.5	-60.0		302.6	568.7	237.9	1.000067
42500.0	689.5	-60.5		296.0	568.0	238.7	1.000066
43000.0	683.5	-61.0		289.5	567.5	239.5	1.000064
43500.0	677.5	-61.4		283.1	566.6	239.8	1.000063

** AT LEAST ONE ABSOLUTE RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3631.30 FT MSL
 30 SEP. 83 1100 MDT
 ASCENSION NO. 144

UPPER AIR DATA
 2730030144
 JALFPH

GEOPHYSIC COORDINATES
 35.16712 LAT DEG
 106.49511 LON DEG

TABLE 8 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KIOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TH)	SPEED KIOTS	
44000.0	167.9	-62.4		277.5	565.6	240.1	21.4	1.000062
44500.0	165.8	-63.4		272.0	564.3	240.0	84.0	1.000061
45000.0	159.0	-64.3		260.6	563.0	234.9	84.6	1.000059
45500.0	155.4	-64.7		260.5	562.5	239.2	80.3	1.000058
46000.0	152.1	-64.9		253.7	562.9	238.1	75.5	1.000057
46500.0	146.5	-64.5		247.7	562.7	236.9	70.9	1.000055
47000.0	144.7	-65.3		242.4	561.7	235.9	67.0	1.000054
47500.0	141.1	-66.0		237.3	560.7	234.7	63.0	1.000053
48000.0	137.6	-66.7		232.3	559.7	233.8	59.3	1.000052
48500.0	134.3	-65.6		225.3	561.3	233.0	55.7	1.000050
49000.0	130.9	-64.4		218.5	562.9	231.5	52.3	1.000049
49500.0	127.7	-65.4		214.1	561.5	227.8	50.2	1.000048
50000.0	124.5	-66.4		209.9	560.1	223.7	48.2	1.000047
50500.0	121.4	-67.5		205.7	558.7	219.0	46.5	1.000046
51000.0	118.4	-68.5		201.6	557.3	214.0	45.2	1.000045
51500.0	115.5	-69.5		197.5	555.9	209.2	43.7	1.000044
52000.0	112.6	-68.7		191.9	557.0	206.8	40.3	1.000043
52500.0	109.8	-67.5		186.0	558.7	203.9	37.0	1.000041
53000.0	107.1	-67.9		181.7	558.2	202.3	34.1	1.000040
53500.0	104.4	-68.2		177.4	557.7	201.2	31.3	1.000040
54000.0	101.8	-68.6		173.3	557.2	194.9	29.3	1.000039
54500.0	99.3	-68.0		168.5	556.0	198.6	28.5	1.000038
55000.0	96.8	-65.2		162.2	561.8	197.2	27.7	1.000036
55500.0	94.4	-65.5		158.4	561.4	196.8	26.9	1.000035
56000.0	92.1	-65.8		154.7	561.0	196.4	26.0	1.000034
56500.0	89.9	-66.1		150.3	562.3	197.5	24.8	1.000033
57000.0	87.7	-65.8		145.9	563.7	199.8	23.4	1.000032
57500.0	85.5	-62.8		141.6	565.1	202.1	22.2	1.000032
58000.0	83.4	-61.7		137.5	566.5	204.1	21.3	1.000031
58500.0	81.4	-61.1		133.8	567.3	206.2	20.5	1.000030
59000.0	79.5	-60.3		130.4	567.6	205.8	19.6	1.000029
59500.0	77.6	-60.6		127.1	567.9	205.3	18.7	1.000028
60000.0	75.7	-60.4		124.0	568.2	205.1	16.9	1.000028
60500.0	73.9	-60.2		120.9	568.5	204.9	14.9	1.000027
61000.0	72.1	-60.0		117.8	568.8	205.5	12.8	1.000026
61500.0	70.4	-59.7		114.9	569.1	207.2	10.7	1.000026
62000.0	68.7	-59.8		111.6	570.4	209.9	8.9	1.000025
62500.0	67.1	-57.8		103.5	571.7	214.4	7.8	1.000024
63000.0	65.5	-57.6		105.8	571.9	220.5	6.7	1.000024
63500.0	63.9	-57.5		103.3	572.1	226.4	6.1	1.000023

STATION ALTITUDE 9351-00 F 11 HSL
 30 SEP. 83
 ASCENSION NO. 100
 UPPER AIR DATA
 2730030144
 JALLEN
 GEODETIC COORDINATES
 33.16712 LAT DEG
 106.49511 LONG DEG

TABLE 8 Cont

GEODETIC ALTITUDE HSL FEET	PRESSURE MILLIBARS	TEMPERATURE ALC DEGREES	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KIOTS	WIND DATA DIRECTION DEGREES(TU)	SPEED KIOTS	INDEX OF REFRACTION
64000.0	62.9	-57.4		100.6	572.3	253.4	5.7	1.000022
64500.0	60.9	-57.2		98.3	572.5	239.0	5.0	1.000022
65000.0	59.5	-57.1		95.9	572.6	245.0	4.3	1.000021
65500.0	58.1	-57.0		93.6	572.8	251.7	3.1	1.000021
66000.0	56.7	-56.8		91.3	573.0	267.8	1.4	1.000020
66500.0	55.4	-56.7		89.1	573.2	17.0	.7	1.000020
67000.0	54.1	-56.5		87.0	573.4	70.5	2.3	1.000019
67500.0	52.8	-56.4		84.9	573.5	74.0	4.1	1.000019
68000.0	51.5	-56.3		82.8	573.7	89.3	6.5	1.000018
68500.0	50.3	-56.1		80.8	573.9	94.5	9.1	1.000018
69000.0	49.1	-56.2		79.2	572.9	92.3	10.7	1.000018
69500.0	48.0	-57.4		77.5	572.2	86.6	11.6	1.000017
70000.0	46.9	-56.9		75.5	572.9	91.1	12.7	1.000017
70500.0	45.8	-56.3		73.5	573.7	70.8	15.0	1.000016
71000.0	44.7	-55.8		71.6	574.4	65.4	17.6	1.000016
71500.0	43.6	-55.2		69.7	575.1	60.5	20.7	1.000016
72000.0	42.5	-55.1		68.1	575.3	59.9	23.9	1.000015
72500.0	41.5	-55.0		66.4	575.4	59.6	25.6	1.000015
73000.0	40.6	-55.0		64.9	575.5	61.0	24.4	1.000014
73500.0	39.7	-54.9		63.3	575.5	62.7	22.3	1.000014
74000.0	38.9	-54.9		61.9	575.6	65.3	19.8	1.000014
74500.0	37.9	-54.8		60.4	575.7	69.2	17.0	1.000013
75000.0	37.0	-54.8		59.0	575.7	74.0	14.5	1.000013
75500.0	36.1	-54.7		57.6	575.8	76.0	13.7	1.000013
76000.0	35.3	-54.4		56.2	576.2	78.4	12.9	1.000013
76500.0	34.4	-54.1		54.8	576.6	81.6	11.6	1.000012
77000.0	33.6	-53.8		53.4	577.0	85.8	11.0	1.000012
77500.0	32.8	-53.5		52.1	577.4	90.2	9.9	1.000012
78000.0	32.1	-53.2		50.8	577.8	92.1	7.6	1.000011
78500.0	31.4	-52.9		49.6	578.2	95.6	5.3	1.000011
79000.0	30.6	-52.6		48.4	578.6	104.0	4.3	1.000011
79500.0	29.9	-52.3		47.2	579.0	115.3	4.0	1.000011
80000.0	29.2	-52.0		46.0	579.3	122.2	4.0	1.000010
80500.0	28.6	-51.7		44.9	579.7	137.9	6.2	1.000010
81000.0	27.9	-51.5		43.9	580.0	169.1	8.9	1.000010
81500.0	27.3	-51.2		42.8	580.4	168.3	9.5	1.000010
82000.0	26.6	-50.9		41.8	580.7	162.1	8.9	1.000009
82500.0	26.0	-50.7		40.8	581.1	154.5	8.3	1.000009
83000.0	25.4	-50.4		39.8	581.5	138.3	7.7	1.000009
83500.0	24.9	-50.1		38.8	581.8	120.9	7.7	1.000009

50 MAY 63 1100 MDT

TABLE 8 Con't

GEOMETRIC ALTIMETER CORRECTION	PRESSURE	TEMPERATURE		REL. HUM. PERCENT	DEFICIT		WIND DATA		INDEX OF REFRACTION
		AIR	DEWPOINT		WIND DIRECTION	WIND SPEED	WIND DIRECTION	WIND SPEED	
0.00000	29.9	-49.0			57.0	582.1	109.3	8.7	1.000008
0.00000	29.7	-49.0			57.0	582.5	107.7	10.3	1.000008
0.00000	29.2	-49.5			56.1	582.8	106.5	11.9	1.000008
0.00000	28.7	-49.1			55.2	583.2	90.1	16.0	1.000008
0.00000	28.2	-48.8			54.4	583.5	75.9	23.3	1.000008
0.00000	27.5	-48.5			53.6	583.9	68.7	31.3	1.000007
0.00000	27.1	-48.2			52.8	584.2			1.000007
0.00000	26.7	-48.0			52.0	584.6			1.000007
0.00000	26.2	-47.7			51.2	584.9			1.000007
0.00000	25.7	-47.4			50.5	585.3			1.000007

GEOD. HC COORDINATES
33-10-12 LAT DEG
106-49-511 LONG DEG

WADSWORTH LEVELS
2730030144
JALLEN
TABLE 9

STATION ALTITUDE 901.00 FEET
30 SEP 65 1100 MDT
ASCT 01.00 LAT. 100

WADSWORTH LEVELS	ALTITUDE FEET	TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES (TN)	SPEED KNOTS
830.0	503.0	10.0	92.	181.1	6.5
809.0	482.0	12.1	92.	177.3	1.7
790.0	460.0	9.6	89.	200.0	22.7
700.0	163.0	5.6	78.	219.1	29.3
650.0	123.0	2.6	92.	214.0	34.2
600.0	103.0	-0.0	90.	219.9	31.7
550.0	100.0	-6.8	84.	215.0	34.6
500.0	101.4	-0.2	90.	218.2	39.7
450.0	217.0	-14.0	13.	225.1	40.5
400.0	246.0	-20.6	16.	225.5	30.5
350.0	270.0	-27.8	79.	220.9	37.3
300.0	314.0	-35.2	20.	225.9	60.2
250.0	355.0	-40.8		217.2	64.5
200.0	403.0	-56.5		233.2	77.8
175.0	430.0	-61.1		239.3	91.7
150.0	461.4	-64.2		237.5	73.1
125.0	497.0	-66.3		224.4	48.5
100.0	501.0	-68.8		199.0	28.8
80.0	506.0	-60.0		205.9	19.9
70.0	614.0	-59.7		207.5	10.4
60.0	645.0	-57.1		242.2	4.6
50.0	683.0	-56.1		95.3	3.6
40.0	730.0	-59.0		62.0	23.2
30.0	791.0	-52.3		112.9	4.0
25.0	829.0	-50.2		127.1	7.6
20.0	870.0	-47.6			

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3999.09 FEET MSL
30 SEP. 83
ASCENSION NO. 404

SIGNIFICANT LEVEL DATA
2730020408
WHITE SANDS
TABLE 10

GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG	TEMPERATURE AIR DE WPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
880.4	25.7	50.0
873.5	23.2	53.0
870.0	22.2	58.0
757.6	12.6	91.0
741.1	12.1	78.0
713.4	8.9	89.0
700.0	8.5	79.0
696.6	8.1	73.0
643.6	4.3	79.0
617.0	1.8	69.0
557.4	-4.0	94.0
544.3	-5.5	92.0
500.0	-7.6	61.0
496.9	-7.6	58.0
493.9	-7.9	58.0
473.9	-10.3	66.0
456.4	-13.0	75.0
441.7	-14.2	70.0
420.5	-16.5	81.0
400.0	-19.5	78.0
344.1	-26.4	42.0
327.5	-28.3	39.0
300.0	-33.4	38.0
274.5	-38.9	40.0
250.0	-44.3	
211.5	-53.6	
200.0	-55.1	
160.5	-65.9	
150.0	-67.5	
140.8	-69.9	
131.2	-65.0	
125.1	-65.9	
112.5	-70.0	
100.0	-69.5	
94.7	-68.6	
92.4	-64.2	
91.1	-63.9	
83.9	-61.5	
70.0	-60.0	
50.0	-55.9	

STATION ALTITUDE 3989.00 FEET MSL
 30 SEP. 83
 ASCENSION NO. 408

1406 NDT

SIGNIFICANT LEVEL DATA

2730020400
 WHITE SANDS

TABLE 10 Cont'd

GEOLYTIC COORDINATES
 32.40043 LAT DEG
 106.37033 LONG DEG

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
30.0 79601.1	-52.4		
24.3 84147.6	-48.6		
21.9 86406.1	-49.6		
20.0 88382.8	-47.4		
14.7 95148.3	-45.8		

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
2730020468
WHITE SANDS
TABLE 11 Con't

STATION ALTITUDE 3989.00 FEET MSL
30 SEP. 83
ASCENSION NO. 468 1406 MDT

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	880.4	25.7	14.5	50.0	1019.0	775.9	210.0	15.9	1.000297
4000.0	880.1	25.6	14.4	50.1	1019.0	675.7	210.0	15.9	1.000297
4500.0	864.9	22.8	13.3	54.8	1011.1	672.5	211.6	14.1	1.000291
5000.0	849.9	22.2	13.5	58.0	995.6	671.8	213.6	12.3	1.000289
5500.0	834.9	20.7	13.4	63.1	982.9	670.2	216.2	10.5	1.000287
6000.0	820.2	19.2	13.2	68.2	970.5	668.5	218.7	9.6	1.000284
6500.0	805.8	17.7	12.9	73.3	958.2	666.8	218.5	10.7	1.000280
7000.0	791.6	16.3	12.5	78.4	946.2	665.1	215.0	10.8	1.000277
7500.0	777.7	14.8	12.0	83.5	934.5	663.3	208.8	10.4	1.000273
8000.0	764.0	13.3	11.5	88.6	922.9	661.6	206.8	11.2	1.000268
8500.0	750.4	12.4	10.0	85.4	909.9	660.3	208.1	12.9	1.000260
9000.0	736.9	11.6	8.1	79.2	896.5	659.3	210.6	15.2	1.000250
9500.0	723.0	10.1	7.3	83.0	885.2	657.4	211.2	18.0	1.000246
10000.0	710.5	8.8	6.2	83.9	873.4	655.8	212.3	20.2	1.000240
10500.0	697.0	8.2	3.8	73.9	859.9	654.9	212.8	22.1	1.000230
11000.0	684.8	7.3	3.0	74.3	847.1	653.8	211.9	23.3	1.000225
11500.0	672.3	6.4	2.4	75.7	834.3	652.7	211.2	24.1	1.000221
12000.0	659.9	5.5	1.8	77.1	821.7	651.6	210.5	24.8	1.000217
12500.0	647.8	4.6	1.2	78.5	809.3	650.5	210.0	25.8	1.000213
13000.0	635.8	3.6	-2.2	76.1	797.6	649.2	209.5	26.8	1.000207
13500.0	624.0	2.5	-2.1	71.7	786.2	647.8	208.7	27.7	1.000201
14000.0	612.4	1.4	-3.3	70.9	774.8	646.4	207.5	28.4	1.000197
14500.0	600.8	.5	-3.5	75.5	763.2	645.2	206.3	28.7	1.000194
15000.0	589.5	-1.8	-3.8	80.2	751.8	643.9	205.2	27.8	1.000191
15500.0	578.4	-1.4	-4.1	84.9	740.6	642.6	204.9	27.0	1.000188
16000.0	567.7	-3.0	-4.4	89.6	729.6	641.3	207.2	26.3	1.000185
16500.0	556.8	-4.1	-4.9	93.9	718.8	640.0	211.3	25.5	1.000182
17000.0	546.1	-5.3	-6.3	92.3	708.4	638.4	218.1	24.7	1.000178
17500.0	535.6	-5.9	-7.8	86.1	696.5	637.6	222.6	24.9	1.000173
18000.0	525.3	-6.4	-9.4	79.0	684.5	637.0	225.4	25.4	1.000168
18500.0	515.2	-6.9	-11.0	72.0	672.7	636.3	225.1	28.6	1.000164
19000.0	505.3	-7.3	-12.8	64.9	661.1	635.7	224.8	31.6	1.000160
19500.0	495.6	-7.7	-14.9	58.0	649.5	635.2	223.9	33.6	1.000155
20000.0	485.9	-8.8	-16.5	61.1	639.5	633.8	223.6	35.8	1.000153
20500.0	476.3	-10.0	-15.3	64.9	629.8	632.5	221.5	38.3	1.000150
21000.0	467.2	-11.3	-15.8	69.4	620.7	630.8	220.5	41.5	1.000148
21500.0	458.0	-12.7	-16.4	74.2	611.9	629.1	219.7	44.7	1.000146
22000.0	449.0	-13.6	-17.5	72.5	601.8	628.0	219.3	46.5	1.000143
22500.0	440.1	-14.4	-18.5	70.8	591.7	627.1	219.1	47.7	1.000140
23000.0	431.3	-15.3	-18.7	75.3	582.0	625.9	218.4	46.7	1.000138

UPPER AIR DATA
2730020468
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
30 SEP. 63
ASCENSION NO. 404 1406 MDT

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 11

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KIOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
23500.0	422.7	-16.3	79.8	572.5	624.8	216.9	43.1	1.000135
24000.0	414.3	-17.4	80.1	563.6	623.4	215.4	38.4	1.000133
24500.0	405.4	-18.6	78.9	555.0	621.9	214.0	32.7	1.000130
25000.0	397.7	-19.8	76.6	546.3	620.4	214.2	29.6	1.000127
25500.0	389.6	-20.7	71.7	537.2	619.2	216.0	26.8	1.000125
26000.0	381.6	-21.7	66.7	528.2	618.0	218.1	24.8	1.000122
26500.0	373.7	-22.6	61.8	519.4	616.8	220.2	23.0	1.000119
27000.0	365.1	-23.6	56.8	510.7	615.6	222.1	21.6	1.000117
27500.0	356.6	-24.5	51.9	502.2	614.4	223.1	20.8	1.000115
28000.0	351.2	-25.5	46.9	493.8	613.2	223.9	21.6	1.000112
28500.0	344.0	-26.4	42.0	485.6	612.0	224.3	24.5	1.000110
29000.0	336.8	-27.2	40.7	477.0	611.0	224.5	28.0	1.000108
29500.0	329.4	-28.0	39.4	468.6	610.0	224.6	31.8	1.000106
30000.0	322.9	-29.1	38.8	460.8	608.6	225.1	34.7	1.000104
30500.0	316.0	-30.4	38.6	453.4	607.1	225.8	36.8	1.000102
31000.0	309.3	-31.6	38.3	446.1	605.5	226.6	38.9	1.000100
31500.0	302.8	-32.9	38.1	438.9	603.9	227.5	41.0	1.000099
32000.0	296.3	-34.2	38.3	431.8	602.3	228.4	43.1	1.000097
32500.0	289.4	-35.5	38.8	424.9	600.6	229.2	45.3	1.000095
33000.0	283.6	-36.8	39.3	418.1	598.9	229.8	47.2	1.000094
33500.0	277.5	-38.2	39.7	411.4	597.2	229.7	48.2	1.000092
34000.0	271.4	-39.5	35.4**	404.7	595.5	229.5	49.2	1.000091
34500.0	265.4	-40.8	25.8**	397.9	593.8	227.7	50.7	1.000089
35000.0	259.5	-42.1	16.1**	391.3	592.2	226.0	52.4	1.000087
35500.0	253.8	-43.4	6.5**	384.8	590.5	224.9	53.0	1.000086
36000.0	248.1	-44.7		378.4	588.8	224.0	53.2	1.000084
36500.0	242.4	-46.0		371.8	587.1	223.4	53.3	1.000083
37000.0	236.4	-47.3		365.4	585.5	223.1	53.5	1.000081
37500.0	231.5	-48.6		359.1	583.8	222.9	53.7	1.000080
38000.0	226.2	-49.9		352.9	582.1	224.6	58.9	1.000079
38500.0	221.0	-51.1		346.6	580.5	226.4	65.3	1.000077
39000.0	216.0	-52.4		340.9	578.8	228.5	71.3	1.000076
39500.0	211.0	-53.7		334.9	577.2	231.7	76.5	1.000075
40000.0	206.1	-54.5		328.1	576.3	234.4	81.9	1.000073
40500.0	201.3	-54.4		321.3	575.5	235.9	84.9	1.000072
41000.0	196.5	-56.0		315.2	574.1	236.9	87.2	1.000070
41500.0	191.7	-57.2		309.3	572.5	237.5	89.1	1.000069
42000.0	187.1	-58.4		303.5	570.9	237.2	90.2	1.000068
42500.0	182.6	-59.6		297.9	569.4	237.3	90.3	1.000066
43000.0	178.2	-60.8		292.3	567.8	238.2	88.1	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 F ET MSL
30 SEP. 83
ASCENSION NO. 408

UPPER AIR DATA
2730020468
WHITE SANDS
TABLE 11 Con't

GEODETIC COORDINATES
32.40043 LAT LEG
106.37033 LONG LEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	173.9	-62.0		286.4	566.2	239.1	86.3	1.000004
44000.0	169.8	-63.1		281.6	564.6	239.8	86.0	1.000003
44500.0	165.7	-64.3		276.4	562.9	240.5	85.7	1.000002
45000.0	161.7	-65.5		271.3	561.3	241.0	86.1	1.000000
45500.0	157.7	-66.3		265.0	560.3	241.5	86.6	1.000059
46000.0	153.8	-66.9		259.8	559.5	241.9	85.2	1.000058
46500.0	150.0	-67.5		254.1	558.7	242.5	82.9	1.000057
47000.0	146.3	-68.5		248.9	557.4	242.9	79.5	1.000055
47500.0	142.6	-69.4		243.8	556.1	243.1	73.9	1.000054
48000.0	139.0	-69.0		237.3	556.6	243.1	68.4	1.000053
48500.0	135.6	-67.3		229.4	559.0	242.1	64.2	1.000051
49000.0	132.2	-65.5		221.9	561.3	240.8	60.0	1.000049
49500.0	129.0	-65.3		216.2	561.6	238.0	58.7	1.000048
50000.0	125.9	-65.8		211.3	561.0	234.8	57.9	1.000047
50500.0	122.7	-66.8		207.0	559.7	231.6	56.4	1.000046
51000.0	119.6	-67.9		203.0	558.1	228.0	54.1	1.000045
51500.0	116.6	-69.0		199.0	556.6	224.2	52.1	1.000044
52000.0	113.7	-70.1		195.1	555.1	220.6	46.8	1.000043
52500.0	110.9	-70.5		190.5	554.6	216.1	41.4	1.000042
53000.0	108.1	-70.2		185.5	555.0	211.6	36.3	1.000041
53500.0	105.3	-70.0		180.6	555.3	208.1	31.3	1.000040
54000.0	102.7	-69.7		175.9	555.6	205.4	27.8	1.000039
54500.0	100.1	-69.5		171.3	555.9	206.2	26.4	1.000038
55000.0	97.6	-69.1		166.6	556.5	207.2	25.4	1.000037
55500.0	95.2	-68.7		162.1	557.1	208.4	25.4	1.000036
56000.0	92.8	-68.0		155.3	562.1	209.7	25.4	1.000035
56500.0	90.3	-67.1		150.9	563.3	212.1	25.2	1.000034
57000.0	88.0	-66.0		147.1	563.4	214.6	25.0	1.000033
57500.0	86.2	-65.2		143.0	564.4	216.0	23.9	1.000032
58000.0	84.1	-64.7		138.5	566.5	221.6	22.8	1.000031
58500.0	82.1	-64.4		135.0	566.9	223.2	19.4	1.000030
59000.0	80.1	-64.2		131.6	567.2	223.8	15.1	1.000029
59500.0	78.2	-64.0		128.3	567.5	222.8	10.6	1.000029
60000.0	76.3	-63.8		125.1	567.6	216.7	5.9	1.000028
60500.0	74.4	-63.5		122.0	568.0	186.2	2.0	1.000027
61000.0	72.6	-63.3		118.9	568.3	125.8	1.3	1.000026
61500.0	70.9	-63.1		115.9	568.6	60.5	2.4	1.000026
62000.0	69.2	-62.9		113.0	569.0	90.0	1.8	1.000025
62500.0	67.6	-62.6		110.2	569.3	144.6	1.0	1.000025
63000.0	66.0	-62.3		107.4	569.7	214.3	2.9	1.000024

STATION ALTITUDE 3944.00 FEET MSL
30 SEP. 63
ASCENSION NO. 408

UPPER AIR DATA
2730020406
WHITE SANDS

GEODETIC COORDINATES
32-40043 LAT DEG
106-37033 LONG DEG

TABLE 11 Cont.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	64.4	-54.0		104.7	570.1	227.5	7.7	1.000023
64000.0	62.4	-54.7		102.1	570.5	230.6	12.5	1.000023
64500.0	61.4	-54.4		99.6	570.9	229.8	9.8	1.000022
65000.0	59.4	-54.1		97.1	571.3	228.3	6.9	1.000022
65500.0	58.4	-57.4		94.6	571.7	222.4	5.0	1.000021
66000.0	57.1	-57.5		92.3	572.1	211.3	4.4	1.000021
66500.0	55.4	-57.2		90.0	572.5	197.4	4.0	1.000020
67000.0	54.4	-56.4		87.7	572.8	164.6	3.2	1.000020
67500.0	53.1	-56.6		85.5	573.2	134.6	3.3	1.000019
68000.0	51.4	-56.3		83.4	573.6	104.3	5.0	1.000019
68500.0	50.6	-56.1		81.3	574.0	84.0	8.1	1.000018
69000.0	49.5	-55.4		79.3	574.3	81.0	11.4	1.000018
69500.0	48.3	-55.7		77.4	574.5	90.6	10.7	1.000017
70000.0	47.2	-55.5		75.5	574.7	102.4	10.2	1.000017
70500.0	46.1	-55.3		73.7	575.0	110.0	10.3	1.000016
71000.0	45.0	-55.2		71.9	575.2	102.8	11.0	1.000016
71500.0	44.0	-55.0		70.2	575.4	96.5	11.9	1.000016
72000.0	42.4	-54.4		68.5	575.6	93.1	12.0	1.000015
72500.0	41.4	-54.7		66.9	575.8	91.2	11.4	1.000015
73000.0	41.0	-54.5		65.3	576.0	89.2	10.8	1.000015
73500.0	40.0	-54.4		63.7	576.2	85.8	11.4	1.000014
74000.0	39.1	-54.2		62.2	576.4	82.7	12.1	1.000014
74500.0	38.2	-54.0		60.7	576.7	81.5	13.6	1.000014
75000.0	37.3	-53.4		59.2	576.9	91.0	14.4	1.000013
75500.0	36.4	-53.7		57.8	577.1	98.6	16.1	1.000013
76000.0	35.6	-53.6		56.4	577.3	104.8	17.1	1.000013
76500.0	34.7	-53.4		55.0	577.5	110.9	16.9	1.000012
77000.0	33.4	-53.2		53.7	577.7	117.1	16.8	1.000012
77500.0	32.1	-53.1		52.4	577.9	120.7	15.5	1.000012
78000.0	32.4	-52.4		51.2	578.1	122.1	12.8	1.000011
78500.0	31.6	-52.8		49.9	578.4	124.4	10.1	1.000011
79000.0	30.4	-52.6		48.7	578.6	120.9	8.5	1.000011
79500.0	30.1	-52.4		47.6	578.8	112.2	7.5	1.000011
80000.0	29.5	-52.1		46.4	579.3	101.3	6.8	1.000010
80500.0	28.4	-51.6		45.3	579.8	93.9	7.1	1.000010
81000.0	28.1	-51.2		44.1	580.4	88.8	7.7	1.000010
81500.0	27.5	-50.4		43.0	580.9	84.4	8.4	1.000010
82000.0	26.8	-50.4		42.0	581.4	75.1	7.5	1.000009
82500.0	26.2	-50.0		40.9	582.0	61.7	6.6	1.000009
83000.0	25.6	-49.6		39.9	582.5	45.5	6.2	1.000009

UPPER AIR DATA
2730020468
WHITE SANDS

STATION ALTITUDE 3989.00 FEET MSL
30 SEP. 83
ASCENSION NO. 464

GEOMETRIC ALTITUDE 3989.00 FEET MSL
30 SEP. 83
ASCENSION NO. 464

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 11 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
83500.0	25.0	-49.1		38.9	583.1	35.2	7.1	1.000009
84000.0	24.5	-48.7		38.0	583.6	27.9	8.3	1.000008
84500.0	23.9	-48.8		37.1	583.6	22.5	9.6	1.000008
85000.0	23.4	-49.0		36.3	583.3	25.1	9.2	1.000008
85500.0	22.8	-49.2		35.5	583.0	28.2	8.8	1.000008
86000.0	22.3	-49.4		34.7	582.7	31.7	8.4	1.000008
86500.0	21.8	-49.5		34.0	582.6	50.0	8.3	1.000008
87000.0	21.3	-48.9		33.1	583.3	68.2	9.2	1.000007
87500.0	20.8	-48.4		32.3	584.1	82.2	10.7	1.000007
88000.0	20.4	-47.8		31.5	584.8	98.4	11.7	1.000007
88500.0	19.9	-47.4		30.7	585.4	112.6	13.3	1.000007
89000.0	19.4	-47.3		30.0	585.5	123.2	15.5	1.000007
89500.0	19.0	-47.1		29.3	585.7	129.0	14.2	1.000007
90000.0	18.6	-47.0		28.6	585.8	135.5	11.9	1.000006
90500.0	18.2	-46.9		28.0	586.0	145.1	9.8	1.000006
91000.0	17.8	-46.8		27.3	586.1	146.0	8.7	1.000006
91500.0	17.4	-46.7		26.7	586.3	140.7	7.9	1.000006
92000.0	17.0	-46.5		26.1	586.4	134.5	7.3	1.000006
92500.0	16.6	-46.4		25.5	586.6			1.000006
93000.0	16.2	-46.3		24.9	586.6			1.000006
93500.0	15.8	-46.2		24.3	586.9			1.000005
94000.0	15.5	-46.1		23.8	587.1			1.000005
94500.0	15.1	-46.0		23.2	587.2			1.000005
95000.0	14.8	-45.8		22.7	587.4			1.000005

STATION ALTITUDE 5989.00 FEET MSL
30 SEP. 63
ASCENSION NO. 468

MANDATORY LEVELS
2730020468
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 12

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA		
		AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	4993.	22.2	13.5	58.	213.5	12.3	
800.0	6711.	17.1	12.8	75.	218.3	11.1	
750.0	8507.	12.4	9.9	85.	206.2	12.9	
700.0	10397.	8.5	4.5	76.	213.0	21.9	
650.0	12397.	4.8	1.3	78.	210.1	25.6	
600.0	14524.	.2	-3.5	76.	206.3	28.7	
550.0	16796.	-4.8	-5.8	93.	215.5	25.0	
500.0	19204.	-7.6	-13.8	61.	224.9	32.7	
450.0	21908.	-13.5	-17.3	73.	219.4	46.4	
400.0	24820.	-19.5	-22.3	78.	213.6	23.6	
350.0	28038.	-25.6	-33.8	46.	223.9	22.0	
300.0	31652.	-33.4	-42.8	38.	227.8	41.8	
250.0	35757.	-44.3			224.4	53.1	
200.0	40335.	-55.1			236.1	85.4	
175.0	43291.	-61.7			238.9	86.4	
150.0	46374.	-67.5			242.4	83.0	
125.0	49780.	-65.9			234.2	57.7	
100.0	54353.	-69.5			206.2	26.4	
80.0	58322.	-61.2			223.7	15.2	
70.0	61550.	-60.0			79.3	2.4	
60.0	64721.	-58.1			226.6	7.3	
50.0	68508.	-55.9			84.1	9.6	
40.0	73193.	-54.4			86.2	11.3	
30.0	79259.	-52.4			111.0	7.4	
25.0	83155.	-49.1			35.4	7.1	
20.0	87966.	-47.4			108.4	12.7	
15.0	94228.	-45.9					

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4120.59 FEET MSL
30 SEP. 85
ASCENSION NO. 240

SIGNIFICANT LEVEL DATA
2730010240
HOLLOMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LONG DEG

TABLE 13

PRESSURE G. OMETRIC MILLIBARS NSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	
876.6	24.3	23.2	93.0
865.4	21.9	18.1	79.0
861.4	22.1	17.0	73.0
860.0	19.7	13.2	66.0
782.8	13.4	12.8	96.0
700.0	7.3	3.0	74.0
633.3	1.9	.1	88.0
589.5	-2.0	-0.4	72.0
554.7	-3.1	-0.0	69.0
548.7	-2.9	-10.0	58.0
523.6	-5.2	-16.1	42.0
500.0	-7.3	-20.1	35.0
464.5	-11.1	-19.2	51.0
450.0	-12.4	-23.7	38.0
434.6	-14.7	-24.7	42.0
426.8	-15.6	-23.0	53.0
414.5	-16.3	-27.0	39.0
400.0	-18.4	-28.6	40.0
362.7	-23.3	-34.1	36.0
344.5	-27.0	-35.1	44.0
322.7	-31.4	-37.1	57.0
300.0	-34.0	-42.2	43.0
273.5	-38.9	-47.6	39.0
250.0	-43.9		
213.3	-53.3		
206.0	-55.4		
165.0	-63.2		
150.0	-65.4		
123.5	-67.8		
112.2	-70.4		
100.0	-69.5		
81.7	-61.2		
70.0	-59.1		
55.2	-55.7		
50.0	-56.5		
36.6	-55.6		
30.0	-52.4		
22.3	-49.1		
20.0	-46.3		
16.2	-45.7		

STATION ALTITUDE 4126.50 FEET MSL
30 SEP. 83
ASCENSION NO. 240

UPPER AIR DATA
2730010240
HOLLOMAN
TABLE 13

GEOMETRIC ALTITUDE
MSL FEET

PRESSURE
MILLIBAR

TEMPERATURE
AIR DEGREES
CENTIGRADE

REL. HUM.
PERCENT

DENSITY
GRAMS PER
CUBIC METER

SPEED OF
WIND
KNOTS

WIND DATA
DIRECTION
DEGREES (TR)

INDEX
OF
REFRACTION

4126.6	870.6	24.3	21.1	93.0	1014.1	676.0	190.0	1.000347
4500.0	865.3	21.9	19.1	79.9	1012.4	672.2	187.9	1.000316
5000.0	850.1	18.9	13.3	67.7	1007.1	668.1	185.5	1.000292
5500.0	835.1	17.7	13.3	75.4	995.2	666.8	183.6	1.000290
6000.0	820.4	16.5	13.3	81.0	979.6	665.4	182.0	1.000287
6500.0	805.4	15.3	13.1	86.7	966.2	664.1	179.8	1.000284
7000.0	791.6	14.2	12.9	92.4	953.0	662.7	176.8	1.000281
7500.0	777.5	13.0	12.2	98.7	939.9	661.3	184.2	1.000275
8000.0	763.5	12.0	10.6	91.1	926.7	660.0	182.1	1.000266
8500.0	749.7	11.6	9.1	87.5	913.7	658.7	189.6	1.000258
9000.0	736.2	10.8	7.5	83.9	900.8	657.4	186.8	1.000250
9500.0	722.9	9.1	5.9	80.3	888.0	656.0	186.5	1.000242
10000.0	709.8	8.1	4.2	76.7	875.5	654.7	185.6	1.000235
10500.0	696.9	7.1	2.9	74.6	862.9	653.5	188.6	1.000229
11000.0	684.1	6.1	2.4	72.2	850.1	652.3	193.4	1.000225
11500.0	671.4	5.1	1.9	70.8	837.5	651.1	191.2	1.000221
12000.0	659.1	4.0	1.3	82.4	825.1	649.9	191.9	1.000217
12500.0	646.9	3.0	.8	85.0	812.8	648.7	193.4	1.000213
13000.0	635.0	2.0	.2	87.6	800.8	647.5	194.8	1.000209
13500.0	623.1	1.0	-1.3	84.4	789.0	646.1	196.3	1.000204
14000.0	611.4	0.0	-3.0	80.1	777.4	644.8	202.1	1.000198
14500.0	599.9	-1.1	-6.7	75.9	765.9	643.5	204.5	1.000193
15000.0	588.6	-2.0	-6.4	71.9	754.4	642.3	206.3	1.000188
15500.0	577.4	-2.4	-6.9	71.0	741.1	641.8	207.0	1.000184
16000.0	566.5	-2.7	-7.4	70.0	728.0	641.4	206.9	1.000180
16500.0	555.7	-3.1	-7.9	69.1	715.2	641.0	207.1	1.000177
17000.0	545.2	-3.5	-10.8	55.8	702.3	640.7	208.0	1.000170
17500.0	534.8	-4.2	-13.2	49.2	691.5	639.4	209.1	1.000166
18000.0	524.6	-5.1	-15.3	42.6	680.9	638.2	210.3	1.000161
18500.0	514.5	-6.0	-17.6	39.3	670.1	637.1	211.5	1.000157
19000.0	504.6	-6.9	-19.3	36.4	659.5	636.0	212.8	1.000154
19500.0	494.8	-7.8	-19.9	37.3	649.1	634.9	213.9	1.000151
20000.0	485.2	-8.9	-19.5	41.5	638.9	633.7	217.3	1.000149
20500.0	475.8	-9.4	-19.3	45.8	628.8	632.5	221.3	1.000147
21000.0	466.5	-10.9	-19.2	50.1	619.0	631.3	224.9	1.000145
21500.0	457.4	-11.7	-21.3	44.6	608.9	630.2	226.8	1.000142
22000.0	448.4	-12.6	-23.3	38.4	599.1	629.0	232.7	1.000138
22500.0	439.5	-14.0	-24.4	40.7	590.3	627.4	235.8	1.000136
23000.0	430.8	-15.1	-23.6	47.4	581.2	626.0	239.1	1.000135
23500.0	422.2	-15.9	-24.4	47.6	571.2	625.1	238.8	1.000132

STATION ALTITUDE 4126.59 FEET MSL
30 SEP. 83
ASCENSION NO. 240

UPPER AIR DATA
2730010240
HOLLOMAN

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LONG DEG

TABLE 14 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KIOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KIOTS	INDEX OF REFRACTION
24000.0	413.8	-16.4	39.0	561.1	624.4	238.3	45.4	1.000129
24500.0	405.5	-17.6	39.6	552.6	623.0	237.6	46.8	1.000127
25000.0	397.3	-18.7	39.7	543.7	621.5	236.4	46.4	1.000124
25500.0	389.2	-19.8	39.9	534.9	620.3	235.2	45.8	1.000122
26000.0	381.3	-20.8	39.0	526.1	619.0	234.9	43.3	1.000120
26500.0	373.5	-21.8	37.2	517.6	617.7	234.4	40.9	1.000118
27000.0	365.9	-22.9	36.4	509.1	616.5	233.1	39.6	1.000116
27500.0	358.4	-24.2	38.3	501.3	614.8	231.5	38.5	1.000114
28000.0	351.0	-25.7	42.4	493.9	613.0	230.1	38.1	1.000112
28500.0	343.7	-27.2	46.4	486.6	611.1	228.7	38.0	1.000110
29000.0	336.5	-28.6	50.0	479.2	609.3	227.4	38.2	1.000109
29500.0	329.4	-30.0	53.5	471.8	607.6	226.4	36.7	1.000107
30000.0	322.5	-31.4	56.9	464.6	605.8	225.3	39.2	1.000105
30500.0	315.6	-32.2	52.7	456.2	604.8	225.4	38.6	1.000103
31000.0	308.4	-33.0	48.6	447.9	603.8	225.6	37.7	1.000101
31500.0	302.3	-33.7	44.5	439.8	602.9	225.7	37.3	1.000099
32000.0	295.8	-34.8	42.4	432.1	601.6	225.5	37.8	1.000097
32500.0	289.4	-35.9	41.4	424.9	600.1	225.4	38.3	1.000095
33000.0	283.1	-37.1	40.5	417.7	598.6	224.1	41.0	1.000094
33500.0	277.0	-38.2	39.5	410.7	597.1	222.9	44.1	1.000092
34000.0	270.9	-39.4	34.9**	403.8	595.6	222.2	47.2	1.000090
34500.0	264.9	-40.7	25.2**	397.0	594.0	222.5	50.4	1.000089
35000.0	259.1	-41.9	15.5**	390.3	592.4	222.8	53.7	1.000087
35500.0	253.3	-43.2	5.8**	383.7	590.8	223.6	55.3	1.000086
36000.0	247.7	-44.5		377.3	589.1	224.6	56.5	1.000084
36500.0	242.0	-45.8		370.9	587.4	225.5	57.7	1.000083
37000.0	236.5	-47.2		364.6	585.6	226.1	58.2	1.000081
37500.0	231.1	-48.6		358.5	583.8	227.5	58.6	1.000080
38000.0	225.8	-49.9		352.4	582.1	229.3	60.0	1.000078
38500.0	220.7	-51.3		346.5	580.3	230.9	64.1	1.000077
39000.0	215.6	-52.7		340.7	578.5	232.7	68.4	1.000076
39500.0	210.7	-53.7		334.4	577.1	234.5	72.7	1.000074
40000.0	205.7	-54.5		327.7	576.1	236.2	77.2	1.000073
40500.0	200.9	-55.3		321.2	575.1	237.5	81.7	1.000072
41000.0	196.1	-56.2		314.9	573.8	238.5	83.2	1.000070
41500.0	191.4	-57.2		308.8	572.5	239.5	84.6	1.000069
42000.0	186.9	-58.2		302.8	571.2	237.5	86.9	1.000067
42500.0	182.4	-59.1		296.9	569.9	237.3	89.6	1.000066
43000.0	178.0	-60.1		291.1	568.6	237.3	91.5	1.000065
43500.0	173.8	-61.1		285.5	567.3	237.5	92.5	1.000064

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 1126.59 FT ET MSL
 30 SEP. 83
 ASCENSION NO. 240

UPPER AIR DATA
 2730010240
 HOLLAMAN

GEOMETRIC COORDINATES
 52.88865 LAT DEG
 106.09965 LONG DEG

TABLE 14 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION (DEGREES TRUE)	SPEED KNOTS	
44000.0	169.0	-62.1		279.9	566.0	237.7	93.4	1.000062
44500.0	165.5	-63.1		274.5	564.7	238.2	93.0	1.000061
45000.0	161.5	-63.8		268.7	563.7	238.9	92.3	1.000060
45500.0	157.5	-64.5		263.0	562.7	239.5	90.7	1.000059
46000.0	153.7	-65.2		257.5	561.8	240.1	85.3	1.000057
46500.0	149.4	-65.4		252.0	560.8	240.7	79.8	1.000056
47000.0	145.2	-66.2		246.0	560.5	241.3	73.1	1.000055
47500.0	142.6	-66.4		240.2	560.2	241.7	65.5	1.000053
48000.0	139.0	-66.6		234.5	559.8	242.3	57.9	1.000052
48500.0	135.6	-66.4		229.0	559.5	242.2	55.4	1.000051
49000.0	132.2	-67.1		223.6	559.2	242.0	53.1	1.000050
49500.0	129.0	-67.4		218.3	558.8	241.3	50.7	1.000049
50000.0	125.8	-67.6		213.2	558.5	236.1	48.1	1.000047
50500.0	122.6	-68.0		208.2	558.0	234.5	45.7	1.000046
51000.0	119.6	-68.7		203.7	557.1	230.3	43.5	1.000045
51500.0	116.6	-69.4		199.3	556.1	225.0	41.4	1.000044
52000.0	113.6	-70.1		194.9	555.2	219.2	37.7	1.000043
52500.0	110.8	-70.3		190.3	554.9	214.8	35.4	1.000042
53000.0	108.0	-70.1		185.3	555.1	212.4	37.3	1.000041
53500.0	105.3	-69.9		180.5	555.4	209.4	36.3	1.000040
54000.0	102.6	-69.7		175.8	555.7	209.4	34.7	1.000039
54500.0	100.1	-69.5		171.2	555.9	209.3	32.9	1.000038
55000.0	97.6	-68.5		166.2	557.3	209.6	31.1	1.000037
55500.0	95.2	-67.5		161.3	558.7	211.9	28.7	1.000036
56000.0	92.4	-66.5		156.5	560.1	214.6	26.4	1.000035
56500.0	90.6	-65.4		151.9	561.5	216.9	26.8	1.000034
57000.0	88.4	-64.4		147.5	562.8	218.6	28.4	1.000033
57500.0	86.2	-63.4		143.1	564.2	220.1	29.7	1.000032
58000.0	84.1	-62.4		138.9	565.6	221.4	30.1	1.000031
58500.0	82.0	-61.5		134.9	567.0	222.7	30.5	1.000030
59000.0	80.0	-60.9		131.4	567.5	224.4	25.1	1.000029
59500.0	78.1	-60.6		128.0	568.0	227.5	17.8	1.000029
60000.0	76.2	-60.3		124.7	568.4	234.8	10.7	1.000028
60500.0	74.4	-59.9		121.6	568.9	232.2	6.9	1.000027
61000.0	72.6	-59.6		118.5	569.3	223.1	3.1	1.000026
61500.0	70.9	-59.3		115.4	569.7	179.9	1.5	1.000026
62000.0	69.2	-58.9		112.5	570.2	198.8	4.3	1.000025
62500.0	67.6	-58.6		109.7	570.7	202.6	7.2	1.000024
63000.0	66.0	-58.2		106.9	571.1	203.7	10.1	1.000024
63500.0	64.4	-57.4		104.2	571.6	208.7	13.0	1.000023

UPPER AIR DATA
2730010240
HOLLOMAN

STATION ALTITUDE 4126.59 FEET MSL
30 SEP. 63
ASCENSION NO. 240

GEOLITIC COORDINATES
32-88865 LAT DEG
106-09965 LONG DEG

TABLE 14 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
64000.0	62.9	-57.6		101.6	72.6	210.6	15.9	1.000023
64500.0	61.4	-57.2		99.0	572.5	213.8	15.4	1.000022
65000.0	59.9	-56.9		96.5	572.9	217.4	14.8	1.000021
65500.0	58.5	-56.5		94.1	573.4	224.5	10.6	1.000021
66000.0	57.1	-56.2		91.7	573.8	264.3	4.1	1.000020
66500.0	55.8	-55.8		89.4	574.3	354.2	6.3	1.000020
67000.0	54.5	-55.8		87.3	574.3	20.0	8.2	1.000019
67500.0	53.2	-56.0		85.3	574.1	34.4	11.0	1.000019
68000.0	51.9	-56.2		83.4	573.8	51.4	10.5	1.000019
68500.0	50.7	-56.4		81.5	573.6	79.2	9.6	1.000018
69000.0	49.5	-56.5		79.6	573.5	104.6	10.7	1.000018
69500.0	48.3	-56.4		77.7	573.6	119.1	10.3	1.000017
70000.0	47.2	-56.3		75.8	573.6	134.0	10.5	1.000017
70500.0	46.1	-56.3		74.0	573.7	140.7	10.2	1.000016
71000.0	45.0	-56.2		72.3	573.8	141.1	9.0	1.000016
71500.0	44.0	-56.1		70.6	573.9	141.5	7.7	1.000015
72000.0	42.9	-56.1		68.9	574.0	123.3	8.4	1.000015
72500.0	41.9	-56.0		67.2	574.1	108.5	9.9	1.000015
73000.0	40.9	-55.9		65.6	574.2	101.2	11.3	1.000015
73500.0	40.0	-55.9		64.1	574.3	100.2	11.8	1.000014
74000.0	39.0	-55.8		62.5	574.4	99.3	12.2	1.000014
74500.0	38.1	-55.7		61.1	574.5	100.4	12.6	1.000014
75000.0	37.2	-55.6		59.6	574.5	101.9	12.9	1.000013
75500.0	36.3	-55.5		58.2	574.8	103.1	13.2	1.000013
76000.0	35.5	-55.1		56.7	575.3	103.0	13.4	1.000013
76500.0	34.7	-54.7		55.3	575.8	102.9	13.5	1.000012
77000.0	33.9	-54.3		53.9	576.3	104.6	13.7	1.000012
77500.0	33.3	-54.0		52.6	576.8	108.2	14.0	1.000012
78000.0	32.5	-53.6		51.3	577.3	111.7	14.4	1.000011
78500.0	31.6	-53.2		50.0	577.8	111.4	13.5	1.000011
79000.0	30.8	-52.8		48.7	578.3	109.7	12.1	1.000011
79500.0	30.1	-52.5		47.5	578.8	106.8	10.6	1.000011
80000.0	29.4	-52.2		46.4	579.1	93.0	7.7	1.000010
80500.0	28.7	-51.9		45.2	579.5	69.5	5.7	1.000010
81000.0	28.1	-51.7		44.2	579.8	45.5	5.6	1.000010
81500.0	27.4	-51.4		43.1	580.1	50.9	6.1	1.000010
82000.0	26.8	-51.1		42.1	580.5	55.4	6.7	1.000009
82500.0	26.2	-50.9		41.0	580.8	61.0	6.6	1.000009
83000.0	25.6	-50.6		40.1	581.1	68.3	6.2	1.000009
83500.0	25.0	-50.4		39.1	581.5	76.4	5.9	1.000009

STATION ALTITUDE 4126.59 FEET MSL
30 SEP. 83
ASCENSION NO. 240

1400 MDT

UPPER AIR DATA
2750010240
HOLLUMAR

GEOGRAPHIC COORDINATES
32°08065 LAT DEG
106°09065 LONG DEG

TABLE 14 CONT.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (T)	SPEED KNOTS	
84000.0	24.4	-50.1		36.2	581.0	70.9	5.7	1.000008
84500.0	23.9	-49.9		37.2	582.1	64.7	5.5	1.000008
85000.0	23.5	-49.6		36.3	582.5	61.4	5.1	1.000008
85500.0	22.8	-49.3		35.5	582.6	63.0	4.3	1.000008
86000.0	22.5	-49.1		34.6	583.2	70.3	3.5	1.000008
86500.0	21.4	-48.5		33.7	584.0	67.0	4.7	1.000008
87000.0	21.3	-47.9		32.9	584.7	66.6	6.6	1.000007
87500.0	20.8	-47.3		32.1	585.5	65.2	8.4	1.000007
88000.0	20.5	-46.7		31.3	586.2	65.2	9.4	1.000007
88500.0	19.9	-46.3		30.5	586.6	97.3	11.3	1.000007
89000.0	19.4	-46.2		29.8	586.9	106.0	12.6	1.000007
89500.0	19.0	-46.2		29.1	587.0	106.2	12.6	1.000005
90000.0	18.5	-46.1		28.5	587.0	106.5	12.5	1.000006
90500.0	18.1	-46.0		27.8	587.1	104.5	11.3	1.000006
91000.0	17.7	-46.0		27.2	587.2	100.7	9.7	1.000006
91500.0	17.3	-45.9		26.6	587.3	95.3	8.1	1.000006
92000.0	16.9	-45.8		26.0	587.4			1.000006
92500.0	16.6	-45.8		25.4	587.5			1.000006

STATION ALTITUDE 4126.69 FEET MSL
30 SEP. 81
ASCENSION NO. 240

MANDATORY LEVELS
2730010240
HOLLUMAI.

TABLE 13

GEOMETRIC COORDINATES
32° 08' 06" LAT DEG
100° 09' 06" LONG DEG

PRESSURE EQUIPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	5004.	18.9	13.3	70.	185.5	9.6	
800.0	6705.	14.9	13.1	89.	170.0	10.7	
750.0	8401.	11.1	9.1	86.	184.7	12.6	
700.0	10373.	7.3	5.0	74.	180.1	20.4	
650.0	12363.	3.3	.9	64.	193.0	24.8	
600.0	14990.	-1.0	-4.7	76.	204.5	32.4	
550.0	16750.	-2.9	-4.5	60.	207.0	32.9	
500.0	19200.	-7.3	-20.1	35.	213.5	35.0	
450.0	21870.	-12.4	-23.7	38.	231.9	41.3	
400.0	24704.	-18.4	-28.0	40.	230.8	46.5	
350.0	28020.	-25.9	-34.7	43.	229.9	38.1	
300.0	31614.	-34.0	-42.2	43.	225.7	37.5	
250.0	35719.	-43.9			224.2	50.0	
200.0	40400.	-55.4			230.3	82.0	
175.0	43258.	-60.8			237.4	92.2	
150.0	46363.	-65.0			240.7	80.2	
125.0	49378.	-67.7			237.4	47.6	
100.0	54300.	-69.5			209.3	32.9	
80.0	59811.	-60.9			224.3	25.5	
70.0	61546.	-59.1			197.3	2.7	
60.0	64733.	-56.9			210.4	14.0	
50.0	68535.	-56.5			93.0	10.1	
40.0	73187.	-55.9			100.3	11.7	
30.0	79271.	-52.4			100.2	10.4	
25.0	83117.	-50.4			75.5	5.0	
20.0	87320.	-46.3			94.3	10.5	

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

of electric conductance
 33.1671 LAI 129
 106.49511 100 116

STANDARD LEVEL DATA
 2750050145
 JALIC

STATION ALTITUDE 9091.00 FEET MSL
 20 SEP. 63 1406 MDT
 ASCE 65101 129. 150

TABLE 16 Cont'd

PROCESSED OF OBSERVED ALTITUDE WIND SPEED IN FEET	TEMPERATURE AIR - DEGREE FAHRENHEIT	REL. HUM. PERCENT
56.0 64694.4	-56.0	
57.5 74630.0	-56.0	

CLIMATIC ALTITUDE 4051.00 FEET MSL
20 SEP. 83
ASCENSION NO. 1406

1406 MDT

WIND DATA
2750050145
JALLEN

GEOMETRIC COORDINATES
33.16712 LAT DEG
106.49511 LONG DEG

TABLE 17 Con't

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBAR'S	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	GEOMETRIC SPEED KNOTS	WIND DATA DIRECTION DEGREES TRUE	SPEED KNOTS	INDEX OF REFRACTION
24000.0	412.7	-15.6	79.3	562.0	227.0	49.0	1.000132
24500.0	404.4	-16.0	70.6	553.5	227.5	50.1	1.000129
25000.0	396.2	-16.8	67.6	544.3	228.1	51.0	1.000126
25500.0	388.2	-17.8	70.6	535.5	228.7	51.2	1.000124
26000.0	380.2	-18.1	64.3	527.2	229.4	51.0	1.000121
26500.0	372.4	-18.4	50.6	519.2	229.6	51.4	1.000118
27000.0	364.7	-18.7	37.0	511.3	230.1	52.1	1.000116
27500.0	357.2	-19.1	23.3	503.0	229.9	53.5	1.000113
28000.0	349.8	-19.2	19.6	495.4	229.5	55.0	1.000111
28500.0	342.5	-19.6	16.5	485.8	229.4	55.3	1.000109
29000.0	335.3	-19.7	22.5	477.0	227.2	55.0	1.000107
29500.0	328.2	-19.9	28.5	469.9	225.5	57.1	1.000106
30000.0	321.3	-20.0	34.5	462.1	223.3	46.6	1.000104
30500.0	314.5	-20.1	40.5	454.3	221.1	44.3	1.000102
31000.0	307.8	-20.3	30.4	447.1	219.2	43.8	1.000100
31500.0	301.2	-20.4	35.5	439.9	217.7	40.2	1.000099
32000.0	294.7	-20.5	36.9	432.2	217.0	40.5	1.000097
32500.0	288.3	-20.6	39.2	424.5	216.5	41.4	1.000095
33000.0	282.0	-20.7	39.4	417.1	216.0	44.6	1.000094
33500.0	275.6	-20.8	32.1	410.2	216.9	47.7	1.000092
34000.0	269.7	-20.9	29.8	403.4	217.6	50.9	1.000090
34500.0	263.8	-21.0	17.5	396.8	216.3	53.7	1.000089
35000.0	257.9	-21.1	10.2	390.3	214.4	55.6	1.000087
35500.0	252.2	-21.2	2.9	383.9	220.4	57.5	1.000086
36000.0	246.6	-21.3		377.4	221.5	59.2	1.000084
36500.0	240.9	-21.4		370.9	222.5	61.2	1.000083
37000.0	235.4	-21.5		364.5	223.6	63.9	1.000081
37500.0	230.1	-21.6		358.2	224.2	66.7	1.000080
38000.0	224.8	-21.7		352.1	224.9	70.3	1.000078
38500.0	219.7	-21.8		346.0	225.6	73.9	1.000077
39000.0	214.6	-21.9		339.7	226.5	77.0	1.000076
39500.0	209.4	-22.0		333.1	227.5	80.1	1.000074
40000.0	204.7	-22.1		326.6	228.5	82.2	1.000073
40500.0	199.9	-22.2		320.3	229.5	84.0	1.000071
41000.0	195.1	-22.3		314.0	230.4	86.5	1.000070
41500.0	190.4	-22.4		307.9	231.3	89.4	1.000069
42000.0	185.9	-22.5		301.9	231.7	91.2	1.000067
42500.0	181.4	-22.6		296.0	232.2	92.7	1.000066
43000.0	177.1	-22.7		290.3	232.5	93.9	1.000065
43500.0	172.9	-22.8		284.7	232.5	94.3	1.000063

At 1406 MDT, the following conditions were observed: 1406 MDT

GEOMETRIC CORRELATIONS
33-16712 TAT 116
100-49511 TAT 116

TABLE 17 Cont'd

STATION ALTITUDE 5,251.60 FEET MSL
30 APR 65
ASCE FILE NO. 105
1406 MDT

GEOMETRIC ALTITUDE PSL FEET	PRESSURE	ADJUSTMENT DEGREE, CENTIGRADE	REL. HUM. PERCENT	WIND DIRECTION DEGREE, TRUE	WIND SPEED KNOTS	INDEX OF REFRACTION
44000.0	160.0	-63.7	279.1	565.2	252.5	1.000002
44500.0	164.0	-63.6	273.7	565.4	252.9	1.0000021
45000.0	160.0	-64.5	267.9	565.0	253.5	1.0000060
45500.0	150.0	-65.0	262.1	562.1	255.1	1.0000038
46000.0	152.0	-65.6	250.5	561.2	256.6	1.0000057
46500.0	149.0	-66.1	250.8	560.6	253.0	1.0000056
47000.0	165.0	-66.1	244.6	560.6	253.5	1.0000054
47500.0	141.0	-66.2	250.4	565.1	257.9	1.0000053
48000.0	135.5	-66.4	250.6	562.0	257.9	1.0000051
48500.0	134.0	-66.4	256.2	561.5	257.6	1.0000050
49000.0	131.0	-66.4	221.7	560.2	257.0	1.0000049
49500.0	126.5	-67.5	217.2	558.9	255.3	1.0000048
50000.0	125.1	-67.7	212.2	558.3	252.1	1.0000047
50500.0	122.0	-67.6	200.9	558.5	227.9	1.0000046
51000.0	119.0	-67.5	201.6	558.6	222.5	1.0000045
51500.0	115.0	-67.4	196.5	558.7	217.6	1.0000044
52000.0	115.2	-67.5	191.5	558.9	214.0	1.0000043
52500.0	110.2	-67.2	186.7	559.1	212.0	1.0000042
53000.0	107.6	-67.1	181.9	559.3	212.4	1.0000041
53500.0	104.9	-66.9	177.3	559.5	213.5	1.0000039
54000.0	102.5	-67.6	173.5	558.5	215.2	1.0000039
54500.0	99.8	-68.5	169.9	557.3	217.0	1.0000038
55000.0	97.5	-69.5	166.5	556.3	219.2	1.0000037
55500.0	94.2	-68.4	161.4	557.5	220.3	1.0000036
56000.0	92.5	-67.5	156.6	558.7	221.7	1.0000035
56500.0	93.2	-65.6	152.2	559.9	222.3	1.0000034
57000.0	80.0	-65.7	147.6	561.0	223.4	1.0000033
57500.0	85.8	-64.0	143.5	562.2	225.3	1.0000032
58000.0	85.7	-63.1	130.9	569.0	229.4	1.0000031
58500.0	81.7	-60.4	133.8	568.3	233.7	1.0000030
59000.0	79.7	-58.0	129.6	570.3	247.4	1.0000029
60000.0	70.0	-53.4	124.1	569.0	255.0	1.0000028
60500.0	74.1	-60.2	121.4	568.3	250.4	1.0000027
61000.0	72.0	-60.4	118.7	567.7	245.7	1.0000026
61500.0	70.6	-61.3	116.1	567.0	240.8	1.0000025
62000.0	65.1	-61.1	113.3	567.2	230.0	1.0000025
62500.0	67.5	-60.6	110.3	566.0	220.1	1.0000025
63000.0	65.7	-60.0	107.4	566.7	212.9	1.0000024
63500.0	64.1	-59.5	104.5	566.5	203.8	1.0000023

STATION ALTITUDE 4021-00 FEET MSL				UPPER AIR DATA				GEOMETRIC COORDINATES			
30 SEP. 63				2730030145				33.18712 LAT DEG			
ASCENSION NO. 145				JALLEN				106.49511 LONG DEG			
				TABLE 17 Con't							
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CC	SPEED OF SOUND METERS	WIND DIRECTION DEGREES (TH)	WIND SPEED KNOTS	INDEX OF REFRACTION			
64000.0	62.0	-58.9		101.6	570.2	212.7	13.3	1.000023			
64500.0	61.1	-58.3		99.1	571.0	219.1	13.3	1.000022			
65000.0	59.7	-57.4		96.5	571.7	230.5	13.2	1.000021			
65500.0	58.2	-57.2		93.9	572.5	240.5	12.3	1.000021			
66000.0	56.8	-56.7		91.5	573.2	251.9	10.4	1.000020			
66500.0	55.5	-56.1		89.1	574.0	262.8	6.5	1.000020			
67000.0	54.2	-56.3		87.0	573.7	310.7	2.2	1.000019			
67500.0	52.9	-56.4		85.0	573.5	70.1	3.9	1.000019			
68000.0	51.7	-56.6		83.1	573.3	86.1	9.1	1.000019			
68500.0	50.4	-56.7		81.2	573.1	100.5	10.7	1.000018			
69000.0	49.3	-56.8		79.3	573.1	111.8	12.6	1.000018			
69500.0	48.1	-56.7		77.4	573.1	119.3	11.3	1.000017			
70000.0	47.0	-56.7		75.6	573.2	128.6	10.1	1.000017			
70500.0	45.9	-56.6		73.8	573.3	150.7	9.0	1.000016			
71000.0	44.8	-56.6		72.0	573.3	152.7	7.8	1.000016			
71500.0	43.7	-56.5		70.3	573.4	126.5	9.0	1.000016			
72000.0	42.7	-56.5		68.6	573.5	121.3	10.5	1.000015			
72500.0	41.7	-56.4		67.0	573.5	116.1	12.3	1.000015			
73000.0	40.7	-56.4		65.4	573.6	112.1	14.4	1.000015			
73500.0	39.7	-56.3		63.9	573.6			1.000014			
74000.0	38.8	-56.3		62.3	573.7			1.000014			
74500.0	37.9	-56.2		60.9	573.8			1.000014			

STATION ALTITUDE 4051.00 FEET MSL
30 SEP. 43
ASCENSION NO. 147 1406 MDT

MANUATORY LEVELS
2730030145
JALLFN

TABLE 18

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DW POINT CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS	
850.0	4996.	17.6	14.1	80.	254.7	5.5	
900.0	6085.	15.0	8.6	65.	247.4	13.0	
750.0	8468.	10.5	0.2	86.	212.0	14.3	
700.0	10342.	6.3	5.3	93.	195.5	23.4	
650.0	12330.	3.2	2.7	96.	195.5	32.6	
600.0	14045.	-1.1	-1.4	98.	200.2	41.1	
550.0	16713.	-4.4	-4.0	97.	211.2	43.2	
500.0	19164.	-8.1	-3.5	97.	215.5	41.6	
450.0	21023.	-14.0	-17.5	74.	223.5	42.8	
400.0	24727.	-19.3	-24.0	66.	227.8	50.5	
350.0	27937.	-27.2	-46.0	15.	229.6	55.0	
300.0	31530.	-34.9	-44.9	35.	217.5	40.0	
250.0	35624.	-44.8			220.8	58.1	
200.0	40304.	-55.7			223.4	83.9	
175.0	43149.	-61.2			232.5	96.4	
150.0	46209.	-66.1			237.6	83.2	
125.0	49001.	-67.7			232.0	56.2	
100.0	54203.	-68.4			216.8	40.8	
80.0	58742.	-58.8			240.7	8.3	
70.0	61475.	-61.5			237.4	11.3	
60.0	64637.	-57.9			220.8	13.2	
50.0	68029.	-56.8			104.4	11.3	
40.0	73073.	-56.3					

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM WSD

DATE 30 Sept 83

1406

COORDINATES (WGS84) X= 488,852.29 Y= 184,982.45 Z= 3993.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO

HEIGHTS ARE METERS AGL OR FEET AGL.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
SFC	210	16
60	218	13
120	223	11
180	232	10
240	221	08
300	223	09
360	240	06
420	220	09
480	234	10
540	236	07
600	221	12
660	240	11
720	224	09
780	229	10
840	256	08
900	226	10
960	211	12
1020	197	08
1080	192	10
1140	184	10
1200	202	17
1260	212	12
1320	210	11
1380	203	11
1440	216	10
1500	204	12
1560	223	18
1620	221	18

[illegible][illegible]

AIMING AND T-TIME COMPUTER MET MESSAGE DATA

30 September 1983

JALLEN 0900 MDT

METCM1332065

301500124879

00178002 29260879
01206002 29170868
02308009 28980843
03321016 28740804
04342020 28500758
05378023 28190714
06383039 27790671
07364041 27500631
08359039 27190593
09357038 26920557
10390034 26690523
11400033 26350490
12403043 25940444
13384046 25230389
14378045 24400339
15388051 23580294
16401062 22820254
17405081 22170219
18429083 21450181
19425088 20860159
20415054 20580135
21381038 20400115
22312016 20790097
23387026 20990083
24017001 21310070
25359017 21510060
26109011 21750051

JALLEN 1100 MDT

METCM1332065

301700124879

00382002 29530879
01249004 29310869
02304005 29080844
03305013 28750805
04345021 28460759
05385028 28120714
06388033 27820672
07378035 27560632
08383031 27260594
09382034 26960558
10389036 26600523
11386041 26320491
12398039 25820445
13401041 25130389
14403039 24380339
15403054 23680294
16390066 22910254
17400073 22120219
18424085 21400187
19426089 20950159
20415054 20760135
21372041 20500115
22340026 20640097
23370022 21120083
24064005 21390071
25371015 21600060
26314006 21660052

WSD 1406 MDT

METCM1324064

302010122880

00373016 30110880
01408012 29860870
02385007 29690846
03389011 29310808
04367013 28830762
05377018 28430718
06375025 28090676
07373025 27760636
08366027 27390597
09371029 27030561
10400025 26740527
11400034 26550494
12390044 26010448
13384028 25310393
14398026 24670343
15405043 23930298
16403051 23070258
17402066 22230222
18422088 21550190
19428086 20810162
20434066 20570137
21393044 20440116
22378038 20480098
23395017 21090084
24052012 21310071
25359016 21490061
26185004 21670052